

**UNCLASSIFIED**

**AD NUMBER**

**AD834357**

**NEW LIMITATION CHANGE**

**TO**

**Approved for public release, distribution  
unlimited**

**FROM**

**Distribution authorized to U.S. Gov't.  
agencies and their contractors;  
Administrative/Operational Use; Jul 1962.  
Other requests shall be referred to  
Central Intelligence Agency, Office of  
Central Reference, 2430 E. Street, NW,  
Washington, DC 20505.**

**AUTHORITY**

**CIA ltr, 7 Sep 2004**

**THIS PAGE IS UNCLASSIFIED**

AD834357



# CONSOLIDATED TRANSLATION SURVEY

Number 55.

FOR JULY 1962

Prepared by

Foreign Documents Division  
CENTRAL INTELLIGENCE AGENCY  
2430 E St., N. W., Washington 25, D. C.

1415

CONSOLIDATED TRANSLATION SURVEY

FOR JULY 1962

TABLE OF CONTENTS

	<u>Page</u>
Notes concerning the survey	c
Request for copies	d
USSR	
Economic	1
Political	20
Military	21
Geographic	21
Sociological	23
Biographic	25
Eastern Europe	
Economic	26
Political	42
Military	42
Geographic	44
Sociological	45
Biographic	46
Western Europe	
Economic	47
Political	49
Military	54
Africa	
Economic	55
Political	55
Military	55
Sociological	56
Biographic	56

	<u>Page</u>
<b>Far East</b>	
Economic	57
Political	66
Military	68
Geographic	69
Sociological	70
<b>Middle East</b>	
Political	71
<b>Latin America</b>	
Economic	72
Political	73
Sociological	74
Biographic	74
<b>World Wide</b>	
Biographic	75
<b>Scientific</b>	
Aeronautics	76
Astronomy	78
Biology	79
Chemistry	86
Electricity	110
Electronics	111
Engineering	120
Fuels	149
Geophysics	150
Mathematics	163
Medicine	164
Minerals/Metals	183
Nuclear Physics	196
Physics	201
Space Research	235
Miscellaneous	237
<b>Information on Cover-to-Cover Translations</b>	243
<b>Author Index</b>	362

CONSOLIDATED TRANSLATION SURVEY

An author index to items in this issue is appended.

This Survey is prepared monthly by Foreign Documents Division, CIA, from lists received through cooperation of US government agencies and includes translations of such agencies, private industry, universities, research institutions, and commercial translation organizations. It is a compilation of foreign documentary projects, completed or started during the month preceding this publication.

Translations are listed by area and subject category. Scientific projects are grouped as a section regardless of geographic area. Title in English, author, foreign language title of source of material, date and data of publication, and publication identification of the completed project are given when available.

Some of the above details may be unavailable on projects listed "in process." New projects in process will be listed only once, their subsequent listing being made when they are reported completed. Projects in process, i.e., not completed as of the date of this Survey, are noted with an asterisk (\*), and when available, a project-control or "in-process" number is noted in parentheses following the title.

AF

Department of Air Force  
Collection and Dissemination  
Assistant Chief of Staff, Intelligence  
ATTN: AFCIN LB3  
Washington 25, DC

AFCRL

Air Force Cambridge Research Laboratories  
Research Library  
Office of Aerospace Research  
United States Air Force  
Laurence G. Hanscom Field  
Bedford, Massachusetts  
ATTN: CRXLR

AGI

American Geological Institute  
2101 Constitution Avenue, N.W.  
Washington 25, DC

AIBS

American Institute of Biological Sciences  
2000 P Street, N.W.  
Washington 6, DC

AIEE

American Institute of Electrical Engineers  
Special Subscription Department  
41 East 28th Street  
New York, 16, New York

AIP

American Institute of Physics  
335 East 45th Street  
New York 17, New York

AMS - Army Map Service (see ACSI)

**API**

Academic Press, Inc.  
111 Fifth Avenue  
New York 3, New York

APL - Applied Physics Laboratory (see Navy)

**ASME**

American Society of Mechanical Engineers  
29 West 39th Street  
New York, N. Y.

**BCIRA**

British Cast Iron Research Association  
Bordesley Hall  
Alvechurch, Birmingham  
England

**BISI**

British Iron and Steel Institute  
4 Grosvenor Gardens  
London, SW 1, England

**BTC**

The Library Research Department  
British Transport Commission  
(British Railways Division)  
London Road, Derby, England

BUMED - Bureau of Medicine (see Navy)

**BWRA**

British Welding Research Association  
Abington Hall, Abington  
Cambridge, England

**CAL**

Commonwealth Acoustic Laboratory  
Customs House  
Circular Quay  
Sydney, Australia

CB

Consultants Bureau, Inc  
227 West 17th Street  
New York 11, New York

CEGB

Central Electricity Generating Board  
Friars House  
157-168, Blackfriars Road  
London, S.E.1, England

Cleaver-Hume Press, Ltd

Cleaver-Hume Press, Ltd  
31 Wright's Lane  
London, W.8, England

Collier Books

65th Avenue  
New York 11, N. Y.

CSIR

Council for Scientific and Industrial Research  
The Head  
Information Division  
PO Box 395  
Pretoria, Africa

CSIRO

Commonwealth Scientific and Industrial Research Organization  
314 Albert Street  
East Melbourne, C 2, Victoria  
Australia

Dept of Com

Department of Commerce  
Office of Technical Services  
Washington 25, DC

Dept of State

Department of State  
Division of Library and Reference Service  
132 State Annex 1  
Washington, DC

Derwent Information Service

Derwent Information Service  
Rochdale House, Theobolds Road  
London, WC 1, England

Elsevier Publishing Co.

Spuistraat 110-112  
Amsterdam, The Netherlands

FTD - Foreign Technology Division (see AF)

Gordon and Breach

Gordon and Breach  
Publishers, Inc.  
150 Fifth Avenue  
New York 11, New York

HB

Henry Brutcher Technical Translation  
PO Box 157  
Altadena, California

HO - Hydrographics Office (see Navy)

ID - Intelligence Document (see ACSI)

IP

Interscience Publishers Inc  
250 Fifth Avenue  
New York 1, New York

- h -

ISA

Instrument Society of America  
313 Sixth Avenue  
Pittsburgh 22, Pennsylvania

JHU/APL

The John Hopkins University/Applied Physics  
Laboratory - (see Navy)

JPRS

Joint Publications Research Service  
For non-Scientific reports

For scientific-technical reports:

Photoduplication Service  
Library of Congress  
Washington 25, DC

Department of Commerce  
Office of Technical Services  
Washington 25, DC

McGraw-Hill Book Company, Inc.

330 West 42d Street  
New York 36, New York

IEB

Mark E. Burgunker  
541 West 113th Street  
New York 25, New York

MIT, Libraries

Massachusetts Institute of Technology Libraries,  
Cambridge, Massachusetts

MT

M. de O. Tollemache  
The Old Rectory  
Lewinor, Oxon

NASA

National Aeronautics and Space Administration  
1512 H Street N.W.  
Washington 25, DC

Natl Bu Stand

National Bureau of Standards  
ATTN: Dr Henry Birnbaum  
Room 314, South Building  
Washington, DC

Navy

Department of Navy  
Office of Naval Intelligence  
Washington 25, DC

NLL

National Lending Library  
for Science and Technology  
Boston Spa, Yorkshire, England

NMS - Navy Medical School (see Navy)

NRL - Naval Research Laboratories (see Navy)

ONI - Office of Naval Intelligence (see Navy)

Pat Off

Patent Office  
Scientific Library  
14th and Constitution Avenue, N.W.  
Washington, DC

PERA

The Information Manager  
Production Engineering Research Association  
Melton Mowbray  
Leicestershire, England

PP

Pergamon Press  
122 East 55th Street  
New York 22, New York

Prentice-Hall Inc

Prentice-Hall Incorporated  
Engelwood Cliff, New Jersey

PS

Primary Sources  
11 Bleecker Street  
New York 12, New York

RAND

RAND Corporation  
ATTN: Publications Office  
1700 Main Street  
Santa Monica, California

RRG

Review of Russian Geology  
Box 6665, College Station  
Duke University  
Durham, North Carolina

Scripta Technica, Inc.

1000 Vermont Avenue, N. W.  
Washington 5, DC

SIAM

Society for Industrial and Applied Mathematics  
Box 7541  
Philadelphia 1, Pennsylvania

TIL - Technical Information Library

Ministry of Aviation  
TIL 1(b)  
Leysdown Road  
Mallingham  
London SE 9, England

UK AEA

United Kingdom Atomic Energy Authority  
Development and Engineering Group  
Risley, Warrington, Lancs, England

Univ of Melbourne

University of Melbourne, Languages Section,  
Faculty of Science, Parkville, N2,  
Victoria, Australia

USDA

Department of Agriculture  
Foreign Agricultural Service  
Room 5609  
14th and Independence Avenue NW  
Washington 25, DC

500th INTC Gp, SIRA - 500th Intelligence Corps Group, SIRA  
(sec ACSI)

525th MI Gp - 525 Military Intelligence Group  
(sec ACSI)

P R O J E C T S   R E P O R T E D

F O R   J U N E   1 9 6 2

USSR

Economic

The Ozernoye Copper Pyrite Deposit in  
the Southern Urals, by I. P. Pastukhov,  
5 pp.

RUSSIAN.

JPRS 14376

Dnepropetrovskaya Oblast, Nature and  
Economy, by P. F. Kalinin, K. L. Lipka,  
et al, (SF-2282).

RUSSIAN, bk, Dnepropetrovskaya Oblast,  
Nature and Economy, 1959, pp 75-100,  
128-134, 144-153, 203-277.

\*JPRS

Economics of Iron and Steel in the USSR,  
by Nikolay Pavlovich Bannyy, Viktor  
Borisovich Brodskiy, Yosif Grigor'yevich  
Gorelik, 286 pp.

RUSSIAN, bk, Ekonomika Chernoy Metallurgii  
SSSR, 1960, pp 183-235, 360-454, 520-552.

JPRS 14147

The Postwar Activity of Enims and the  
Stankokonstruktsiya Plant, 28 pp.  
RUSSIAN, bk, Eksperimental'nyy  
Nauchno-Issledovatel'skiy Institut  
Metallorezhushchikh Stankov i  
Ordena Lenina Zavod Stankokonstruktsiya,  
1958, pp 23-54.

JPRS 14409

Memorable Dates From the History of  
Enims and the Stankokonstruktsiya  
Plant, 7 pp.  
RUSSIAN, bk, Eksperimental'nyy  
Nauchno-Issledovatel'skiy Institut  
Metallorezhushchikh Stankov i  
Ordena Lenina Zavod Stankokonstruktsiya,  
1958, pp 62-66.

JPRS 14409

USSR  
Economic (Contd)

Geography of Transport of the USSR.  
RUSSIAN, bk, Geografriia Transporta  
SSSR, 1960, pp 6-8, 110-133, 190-215,  
271-380.

\*ACSI I-1637  
ID 2201427

Production of Medicinal Preparation  
and Medical Equipment Items in the  
Period 1959-1965, by A. G. Natradze,  
105 pp.  
RUSSIAN, bk, Proizvodstvo Lekarstvennykh  
Preparatov i Izdeliy Meditsinskoy Tekhniki  
V 1959-1965, 1961, pp 1-64.

JPRS 14361

Water Transport.  
RUSSIAN, bk, Technoi Transport, 1959,  
pp A. 1-5, 31-36, 38-40, 52, 53;  
B. pp 4-9, 41-43; C. pp 1-6, 28-40,  
43, 44, 46-50.

\*ACSI I-1636-A-C  
ID 2201426

Cost of Maritime Shipping, by  
V. P. Kolomoytsev, (SF-2281).  
RUSSIAN, bk, Sebestoimost' Morskikh  
Perevozok, 1960, pp 1-371.

\*JPRS

Tires for Vehicles of Increased  
Roadability, by G. M. Tsukerberg,  
S. P. Zakharov, B. V. Nenakhov.  
RUSSIAN, bk, Shiny Dlya Avtomobiley  
Povyshennoy Prokhodimosti, 1960, 71 pp.

\*ACSI I-1665  
ID 2177936

The Volga-Vyatka Region, by  
G. P. Matveyev, G. A. Privalovskaya,  
147 pp.  
RUSSIAN, bk, Volgo-Vyatskiy Rayon,  
1961, pp 189-267, 290-320, 354-383,  
403-427, 450-473, 496-522.

JPRS 14249

USSR  
Economic (Contd)

The Kursk Magnetic Anomaly, by A. Popov,  
3 pp.

RUSSIAN, per, Agitator, No 8, Apr 1962,  
pp 34-36.

JPRS 14420

Signals and Communications on the Soviet  
Railroads in 1962, a Report, by  
N. M. Semenov, 6 pp.

RUSSIAN, per, Avtomat, Telemekh i  
Svyaz', No 2, 1962, pp 1-3.

JPRS 14266

For Completion of Overall Mechanization,  
by I. P. Borodachev, 6 pp.

RUSSIAN, per, Avtomobil Dorogi, No 2,  
1962, pp 4-7.

JPRS 14411

Science and Industry in Debt to Large-  
Scale Chemical Industry, by F. Aliyev,  
G. Vasil'yev, et al, 7 pp.

RUSSIAN, np, Bakinskiy Rabochiy,  
18 Apr 1962.

JPRS 14275

Plant Resources of the USSR in the  
Service of the National Economy, by  
Al. A. Fedorov, 34 pp.

RUSSIAN, per, Botan Zhur, Vol XLVI,  
No 10, 1961, pp 1385-1401.

NLL Tr Bulletin  
Vol 4, No 4, 1962

Analyzing the Effectiveness of Using  
Fixed and Working Capital in Whole-  
sale Trade, by A. Kaplan, 11 pp.

RUSSIAN, per, Bukhgalterskiy Ucheb,  
No 1, 1962, pp 20-27.

JPRS 14141

Digestion of Pulp for Thin Capacitor  
Paper, by B. G. Milov, M. I. Vitotova,  
7 pp.

RUSSIAN, per, Bumazhnaya Prom, No 1,  
1962, pp 17-19.

JPRS 14398

USSR  
Economic (Contd)

Results of Socialist Competition by Industrial Enterprises and Construction Organizations for Fourth Quarter of 1961 Examined by Moskovskaya Oblast Executive Committee and Presidium of Moskovskaya Oblast Council of Trade Unions, 4 pp.  
RUSSIAN, per, Byul Ispolkomu Moskovskogo Oblastnogo Soveta, No 4, Feb 1962,  
pp 19, 20.

JPRS 14442

Selected Articles From the Russian Newspaper Ekon Gazeta.

11 Dec 1961.  
Electrical Insulation: Mica and New Synthetic Forms, by F. Gorshkov, 4 pp, (p 15).  
Electrical Industry Lacks Insulator Plastics, by I. Mayofis, 3 pp, (p 31).

JPRS 14398

No 7 (28), 12 Feb 1962.  
The Machine of the Future, by G. Zakharov, 6 pp.

JPRS 14397

The Fate of an Invention at Sumy Superphosphate Plant, by K. Saridabakhov, 4 pp, (p 27).

JPRS 14182

No 10 (31), 5 Mar 1962.  
Machines Are Needed for Harvesting Potatoes, by N. Zagrubskiy, G. Pleshakov, 6 pp, (p 18).

JPRS 14216

New Models of Agricultural Machines, 7 pp, (pp 24, 25).

No 11 (32), 12 Mar 1962, p 14.  
The Most Efficient Steel Production Method. A. The Wide Road Open To Converters, by I. Belobrov, 8 pp.

JPRS 14410

USSR  
Economic (Contd)

Selected Articles From the Russian  
Newspaper Ekon Gazeta. (Contd)

- No 14, 2 Apr 1962, p 21. JPRS 14258  
Jurisdiction Over Sales Bases  
and Offices, by I. Usmakov, 4 pp.
- No 16, 16 Apr 1962, p 23. JPRS 14440  
The Sokolovsko-Sarbayskiy Mining-  
Concentration Combine, by  
I. Shmel'kov, 3 pp.
- No 17 (38), 23 Apr 1962. JPRS 14326  
Reserves of the Aktyubinsk Chemical  
Combine Imeni Kirov, by G. Kitin,  
M. Neymer, 3 pp, (p 21).
- "Volitional Startup" of the  
Sumgait Superphosphate Plant  
and Its Consequences, by  
K. Aver'yanov, 3 pp, (p 22).
- No 18, 30 Apr 1962, p 30. JPRS 14326  
Improvements at the Omsk Tire Plant,  
by B. Borovitskiy, 4 pp.
- No 19, 7 May 1962. JPRS 14326  
Lagging Production of Fat Substi-  
tutes, by P. Naymenko, 3 pp,  
(p 23).
- Lagging Production of Herbicides  
in Azerbaijan, by K. Aver'yanov,  
3 pp, (p 23).
- Reduction of Expenditures per  
Ruble of Commodity Production,  
by M. Grigoryan, 4 pp, (p 33).
- Instead of Grain -- Gifts of Chemistry,  
by A. Belozerov, 3 pp, (p 34).
- Thorough Development of the Synthetic  
Rubber Industry, by T. Bashkatov, 5 pp,  
(p 36).
- 12 May 1962, p 26. JPRS 14276  
Unjustified Delay in Fulfillment of  
Textile Industry Construction Schedule,  
by B. Kislyakov, 5 pp.

USSR  
Economic (Contd)

The Role of Siberia in the Production of Agricultural Products, by M. Tikhomirov, 8 pp.  
RUSSIAN, per, Ekon Sel'skogo Khoz, No 3, 1962, pp 19-24.

JPRS 14141

The Plowed Field System of Agriculture, by G. Nalivayko, 22 pp.  
RUSSIAN, per, Ekon Sel'skogo Khoz, No 3, 1962, pp 44-57.

JPRS 14141

The Methods for Determining the Effectiveness of Capital Investments in Agriculture, by N. Dudurov, 15 pp.  
RUSSIAN, per, Ekon Sel'skogo Khoz, No 3, 1962, pp 85-92.

JPRS 14141

Computing an Optimum Scheme for the Placement of Enterprises in the Construction Materials Industry Through the Methods of Linear Programming, by I. Birman, 14 pp.  
RUSSIAN, per, Ekon Stroitel', No 3, 1962, pp 52-59.

JPRS 14141

Railroad Electrification in 1962, by Ye. F. Rudoy, 11 pp.  
RUSSIAN, per, Elektricheskaya i Teplov Tyaga, No 1 (61), 1962, pp 1-4.

JPRS 14266

New High-Voltage Breakers, Drive Mechanisms, Disconnectors, and Shorting Switches, 6 pp.  
RUSSIAN, per, Energetik, No 1, 2, 1962, p 39.

JPRS 14325

Indoor Current Transformers for 20 kv, 4 pp.  
RUSSIAN, per, Energetik, No 3, 1962, pp 37, 38.

JPRS 14325

Combine State Financial Control and Public Control, by F. Startsev, 6 pp.  
RUSSIAN, per, Finansy SSSR, No 1, 1962, pp 56-60.

JPRS 14141

USSR  
Economic (Contd)

Analyzing the Formation and Utilization of the Fund for Introducing New Technology, by R. Novikov, S. Ryumin, 9 pp.  
RUSSIAN, per, Finansy SSSR, No 1, 1962, pp 80-83.

JPRS 14141

Potential Sources of Increased Labor Productivity at the Mines of the Pyshma Ore Administration, by N. P. Blokh, P. I. Kolupayev, 13 pp.  
RUSSIAN, per, Gornyy Zhur, No 1, 1962, pp 39-41.

JPRS 14422

Problems of Automation of Storing Equipment Used in the Ore-Mining Industry, by Ya. B. Kal'nitskiy, S. P. Vasil'yevskiy, 16 pp.  
RUSSIAN, per, Gornyy Zhur, No 1, 1962, pp 54-57.

JPRS 14422

Automatic Equipment and Controls for the Ore Mining Industry, by L. G. Zhivov, 5 pp.  
RUSSIAN, per, Gornyy Zhur, No 1, 1962, pp 57, 58.

JPRS 14422

The Development of the Transport System in the Ukraine, by N. Rozdobud'ko, 3 pp.  
RUSSIAN, np, Gudok, 18 Feb 1962, p 3.

JPRS 14266

Duplication and Red Tape in Modernizing the Kazkah Railroad, by I. Vertel', 3 pp.  
RUSSIAN, np, Gudok, 23 Feb 1962, p 3.

JPRS 14266

Achievements of State Union Experimental Dye Plant During Past Three Years, by I. F. Dyuzhev, 6 pp.  
RUSSIAN, per, Khim Prom, No 12, 1961, pp 2-4.

JPRS 14182

USSR  
Economic (Contd)

The Democratic Bases of the Management  
of the Economy Are Being Expanded, by  
V. Prokhorov, 13 pp.

RUSSIAN, per, Kommunist, No 8,  
31 May 1962, pp 78-85.

JPRS 14237

The Development of Culture Is Becoming  
the Affair of the Masses, by A. Popov,  
14 pp.

RUSSIAN, per, Kommunist, No 8, 31 May 1962,  
pp 86-93.

JPRS 14237

The Force of Public Opinion, by  
M. Igitkhanyan, 17 pp.  
RUSSIAN, per, Kommunist, No 8, 31 May 1962,  
pp 94-103.

JPRS 14237

Consumer Goods Must Be Both Beautiful  
and of Excellent Quality, by M. Vaarandi,  
11 pp.

RUSSIAN, per, Kommunist Estonii, No 1,  
1962, pp 39-45.

JPRS 14172

Leningrad Electrical Machine Building  
Plants Derelict in Coordinated Intro-  
duction of New Technology, by  
V. Berezov, 6 pp.

RUSSIAN, np, Leningrad Pravda, 20 Mar 1962,  
p 2.

JPRS 14325

Modern Equipment Urgently Needed in the  
Lumber Industry, by M. Petrovskaya, 4 pp.  
RUSSIAN, per, Les Prom', 29 Mar 1962.

JPRS 14413

Lack of Good Lacquers in the Furniture  
Industry, by V. Rassokhin, 3 pp.  
RUSSIAN, np, Les Prom', 19 Apr 1962.

JPRS 14275

Development of Komi ASSR, by V. Vityazeva,  
3 pp.

RUSSIAN, per, Les Prom', 26 Apr 1962.

JPRS 14413

USSR  
Economic (Contd)

Basic Directions of Technical Progress  
in Machine Building, 8 pp.  
RUSSIAN, per, Mashinostroitel', Mar 1962,  
pp 1-3.

JPRS 14418

Selected Articles From the Russian  
Periodical Metallurg, No 4, 1962.

JPRS 14420

Progress of the Kuznetsk Metallurgical  
Combine, by B. N. Zherebin, 6 pp,  
(pp 1-3).

Competition of the Kuznetsk, Magni-  
togorsk, and Nizhniy Tagil Metallurgical  
Combines, by N. Miltovatskiy, 4 pp,  
(pp 4, 5).

Production Conference at the Kuznetsk  
Metallurgical Combine, by A. N. Glazov,  
A. D. Kolyvanov, 4 pp, (pp 5, 6).

Progress During the First Three  
Years of the Seven-Year Plan at  
the Kuznetsk Metallurgical Combine,  
by M. D. Karachentsev, A. F. Yegorov,  
3 pp, (pp 7, 8).

Conference of High-Frequency Tempering  
of Steel of Low-Tempering Capacity, by  
M. G. Lozinskiy, 5 pp.  
RUSSIAN, per, Metalloved i Term Obrabotka  
Metallov, No 12, 1961, pp 46, 47.

JPRS 14410

Meat Processing Equipment: Prospects  
and Problems, 12 pp.  
RUSSIAN, per, Myasnaya Industriya SSSR,  
No 4, 1960, pp 1-6.

JPRS 14414

Improving the Construction of the Meat  
Packing Industry Enterprises, 9 pp.  
RUSSIAN, per, Myasnaya Industriya SSSR,  
No 1, 1962, pp 1-4.

JPRS 14172

USSR  
Economic (Contd)

The First Three Years of the Seven-Year Plan for the Meat Packing Industry,  
by M. Barbashin, 6 pp.  
RUSSIAN, per, Myasnaya Industriya SSSR,  
No 1, 1962, pp 5, 6.

JPRS 14172

Selected Articles From the Russian  
Periodical Narod Khoz Kazakh.

No 1, 1962, pp 25-34.  
Outlook for the Development of  
Industry in Tselinny Kray, by  
B. Dvoskin, I. Sidorov, 22 pp.

JPRS 14377

No 2, 1962.  
All Personnel Striving for High  
Labor Indices at the Sokolovsko-Sarbayskiy Mining-Concentration  
Combine, by N. Sandrigaylo, 8 pp,  
(pp 3-8).

JPRS 14440

Our Tasks at the Balkhash Mining-Metallurgical Combine, by  
N. Matveyenko, V. Meyerovich,  
3 pp, (pp 13-15).

JPRS 14259

Acceleration of the Changeover  
To Overall Mechanization and  
Automation, by I. Shchetinin,  
3 pp, (pp 60, 61).

JPRS 14259

No 3, 1962, pp 11-15.  
Production Planning Needs Improvement,  
by M. Stolyarova, 8 pp.

JPRS 14413

The Development of the Money and  
Credit System During the Construction of Communism, by I. Ayzenberg,  
16 pp.

RUSSIAN, per, Nauch Dok Vyssh Shkoly, Ekon-Nauk, No 1, 1962,  
pp 31-42.

JPRS 14141

**USSR**  
**Economic (Contd)**

Machines Control Production, by  
A. Gorshkov, 8 pp.  
RUSSIAN, per, Nauch-Tekh Obshch SSSR,  
No 1, 1962, pp 8-12.

JPRS 14141

Auxiliary Operations Should Be  
Mechanized, by I. Sheboldashev,  
5 pp.  
RUSSIAN, per, Nauch-Tekh Obshch SSSR,  
Apr 1962, pp 43, 44.

JPRS 14377

The Role of Industrial Workers in the  
Development of Agriculture, by  
N. Martynov, 6 pp.  
RUSSIAN, per, Partiynaya Zhizn', No 4,  
1962, pp 31-37.

JPRS 14413

The Role of Party Members in the  
Progress of the Usti-Kamenogorsk  
Lead-Zinc Combine Imeni V. I. Lenin,  
by B. Odiashvili, 4 pp.  
RUSSIAN, per, Partiynaya Zhizn',  
No 4, Feb 1962, pp 43-47.

JPRS 14259

"Zaporozhstal'" Plant Party Members  
Striving for the Early Fulfillment  
of the Seven-Year Plan, by I. Bondaletof,  
4 pp.  
RUSSIAN, per, Partiynaya Zhizn', No 7,  
1962, pp 22-24, 26, 27.

JPRS 14440

Planning Statistics, 1960, 1980, 9 pp.  
RUSSIAN, per, Plan Khoz, No 12, 1961,  
pp 84-89.

JPRS 14141

USSR  
Economic (Contd)

Selected Articles From the Russian  
Newspaper Pravda.

- 10 Feb 1962, p 2. JPRS 14410  
Shortcomings at Orsko-Khalilovo  
Metallurgical Combine, by V. Parfenov,  
7 pp.
- 5 Mar 1962. JPRS 14216  
The Kirov Plant Will Build Tractors  
Driven by Engines Developing 250 to  
300 Horsepower, by Yu. Zakharov, 5 pp.
- 11 Apr 1962, 4 pp. JPRS 14258  
New Life for Motor Vehicle Tires, by  
V. Sherstyuk, S. Serbulov, 4 pp.
- 18 Apr 1962, p 3. JPRS 14440  
Oxygen-Converter Method in Metallurgy,  
by N. Tikhonov, 3 pp.
- Solution of the Problem of Liquid  
Fertilizers, by G. Vilesov, 4 pp. JPRS 14275  
RUSSIAN, np, Pravda Ukrainskaya, 1 Apr 1962.
- Time To Solve the Problem of Liquid  
Fertilizers, by N. Gureyev, 3 pp. JPRS 14275  
RUSSIAN, np, Pravda Ukrainskaya, 18 Apr 1962.
- New 10-kv Power Cable, by K. Oganesyan,  
Yu. Kabalaliyev, 11 pp. JPRS 14325  
RUSSIAN, per, Pravda Armenii, No 9, 1961,  
pp 30-34.
- Improving the Manufacture of Automobile  
Tires and Increasing Their Mileage, by  
E. Karepetyan, 3 pp. JPRS 14182  
RUSSIAN, per, Pravda Armenii, No 2, 1962,  
pp 55, 56.
- Further Increase in the Resources of  
Agricultural Ores, 8 pp. JPRS 14275  
RUSSIAN, per, Razvedka i Okhrana Nedra,  
No 4, 1961, pp 1-6.

USSR  
Economic (Contd)

The Potential of the Manganese Oligocene Deposits in Georgia, by R. D. Lekvindaze, V. Ya. Edilashvili, 14 pp.  
RUSSIAN, per, Razvedka i Okhraka Nedr, No 4, 1962, pp 8-15.

JPRS 14376

Problems in the Development of Transportation in the Bratsk Water Reservoir, by A. Kazakov.  
RUSSIAN, per, Rechnoy Transport, No 4, 1962, pp 34-36.

\*ACSI I-1688  
ID 2203221

The Soviet Seed-Growing Industry Needs Its Own Research Center, by I. G. Strona.  
RUSSIAN, per, Selek i Semen, Vol XXV, No 1, 1960, pp 28-30. 9088123

USDA Tr A-1331

Lack of Management at the Natural Gasoline Plant, by V. Mashin, Ya. Tolstikov, 3 pp.  
RUSSIAN, np, Sovet Estoniya, 14 Apr 1962.

JPRS 14258

The Green Light for Chemical Materials, by Ch. Sobolevskiy, 3 pp.  
RUSSIAN, np, Sovet Latviya, 10 Apr 1962.

JPRS 14258

The Ionava Plant -- a Crash Construction Project of the Seven-Year Plan, 3 pp.  
RUSSIAN, np, Sovet Litva, 13 Apr 1962.

JPRS 14258

Lagging Construction of the Omsk Synthetic Rubber Plant, by N. Gamov, 4 pp.  
RUSSIAN, np, Sovet Rossiya, 10 Apr 1962.

JPRS 14258

Selected Articles From the Russian Periodical Sovet Torgovly.

JPRS 14172

15 Mar 1962.  
Following the Principle -- Do As You Please, by A. Pisarenko, 4 pp.

USSR  
Economic (Contd)

Selected Articles From the Russian  
Periodical Sovet Torgovlya. (Contd)

JPRS 14172

No 3, 1962.

What Is Hindering the Production  
of Good Clothes, by S. Kirillov,  
A. Rudakov, 4 pp, (pp 7, 8).

Clothes Must Be Varied and  
Beautiful, by F. Feoktistov,  
4 pp, (pp 8-10).

Problems Awaiting Solution, by  
Ye. Fleysher, 8 pp, (pp 10-13).

Electrical Appliances Today and  
Tomorrow, by G. Ivanov, 9 pp,  
(pp 26-29).

Investigations at the Institute for  
Iron Metallurgy Ak Nauk Ukraine, by  
Z. I. Nekrasov, N. I. Krasavtsev,  
V. D. Chekhranov.

RUSSIAN, per, Stal', No 5, 1957,  
pp 468, 469.

BISI 2236

Standardization and Normalization in  
the Enterprises of Leningradskiy  
Sovnarkhoz, by R. A. Reznikov, 10 pp.  
RUSSIAN, per, Standartizatsiya, No 4,  
1962.

JPRS 14442

Fundamental Directions of Scientific  
Research and Experimental Constructional  
Work in the Glass Industry, by  
F. G. Solinov.

RUSSIAN, per, Steklo i Keramika, No 4,  
1959, pp 1-5.

CSIRO

The Future Course of High-Voltage Insu-  
lator Production, by Ya. S. Proskurovskiy,  
A. M. Khaykin, 7 pp.

RUSSIAN, per, Steklo i Kerramika, No 4,  
1962, pp 37, 38.

JPRS 14398

USSR  
Economic (Contd)

More New Machines for Construction  
Workers, by Yu. B. Deynego, 6 pp.  
RUSSIAN, per, Stroitel' i Dorozhnyye  
Mashiny, No 3, 1962, pp 1-8.

JPRS 14411

Selected Articles From the Russian  
Periodical Sudostroyeniye. JPRS 14266

Jan 1962.  
Diesel Motorship "Gorizont", by  
Yu. N. Vasil'yev, 9 pp, (pp 3-7).

Tanker "Praga", New Seven-Year  
Plan Vessel, 5 pp, (pp 86, 87).

No 2, 1962.  
The Tanker "Druzhba", by A. P. Dorokhov,  
6 pp, (pp 1-5).

The Tanker "Mir", by I. A. Zaytsev,  
16 pp, (pp 5-9).

The Prospects of Developing Ship's  
Power Plants on the Basis of Magneto-  
Gastodynamic Interaction, by  
P. D. Ivanov, 22 pp, (pp 32-36).

The Scientific and Technical  
Conference on Air Conditioning  
Aboard Ships, by S. A. Bogatykh,  
10 pp, (pp 76, 77).

Conference on Problems of Specializa-  
tion in Production, by L. M. Bystrevskiy,  
8 pp, (pp 77, 78).

Through the Effort of Millions, 6 pp.  
RUSSIAN, per, Tekstil' Prom, No 1,  
1962, pp 1-4.

JPRS 14172

The Properties of the DT-75 Tractor, by  
Ye. M. Sorokin, 5 pp.  
RUSSIAN, per, Traktory i Sel'khozhashiny,  
No 2, 1962, pp 1-4.

JPRS 14216

USSR  
Economic (Contd)

Results of 1961 Agricultural and State Tests of Potato-Harvesting Combines and Sorting Stations, by G. D. Petrov, M. I. Kletskin, 5 pp.  
RUSSIAN, per, Traktory i Sel'khozmashiny, Feb 1962, pp 17-22.

JPRS 14216

Rational Procedure for Calculating the Volumes of Railroad Beds by the Electronic Computer Center, by N. Ye. Konovalov, A. N. Sibirko. 5 pp.  
RUSSIAN, per, Transport Stroitel', No 1, 1962, pp 38, 39.

JPRS 14266

The Questions of Mechanizing Accounting in Agriculture, by Yu. V. Vasil'yev, 9 pp.  
RUSSIAN, per, Uchet i Finansy v Kolkhoz i Sovkhoz, No 4, 1962, pp 5-11.

JPRS 14141

Conference on Explosion-Proof Electrical Equipment, by Ye. N. Zikeyev, V. A. Khorunzhiy, 5 pp.  
RUSSIAN, per, Vestnik Elektroprom, No 2, 1962, pp 77, 78.

JPRS 14412

Application of Ceramet Products in the Electrical Industry, by A. B. Al'tman, 4 pp.  
RUSSIAN, per, Vestnik Elektroprom, No 2, 1962, pp 79, 80.

JPRS 14412

The Use of the Balance Method in Planning the National Economy, by A. A. Gatanova, 13 pp.  
RUSSIAN, per, Vest Leningrad U, Ser Ekon-Filosofii i Prava, No 5, 1962, pp 50-59.

JPRS 14141

At the Altai Agricultural Institute, by D. P. Sokl'skiy.  
RUSSIAN, per, Vest Sel'skokhoz Nauk, Vol VII, No 2, 1962, pp 148-151. 9088142

USDA Tr A-1350

USSR  
Economic (Contd)

The Machinery and Equipment Inventory  
in 1962, by A. Belyakov, 11 pp.  
RUSSIAN, per, Vest Statistiki, No 2,  
1962, pp 23-30.

JPRS 14141

The All-Union Inter-Plant Scientific  
Conference on Mechanizing Accounting  
and Statistics on the Basis of Modern  
Computer Equipment, 9 pp.  
RUSSIAN, per, Vest Statistiki, No 2,  
1962, pp 87-91.

JPRS 14141

Statistics and Mathematics, by A. Boyarskiy,  
16 pp.  
RUSSIAN, per, Vest Statistiki, No 3,  
1962, pp 18-29.

JPRS 14141

Soviet Machine Tools Must Be the Best  
in the World, by V. Dolyakov, 4 pp.  
RUSSIAN, per, Vnesh Torg, No 4, 1962,  
pp 32, 33.

JPRS 14399

Selected Articles From the Russian  
Newspaper Vodnyy Transport.

JPRS 14266

16 Jan 1962.  
Danube Steamship Company Develops  
Foreign Trade Hauls, by L. Kapikrayan,  
4 pp.

18 Jan 1962.  
Constructing as Single Interbasic  
Schedule, by N. Gor'kov, 4 pp.

23 Jan 1962.  
Odessa Congress of Scientific-  
Technical Society of Water Transport,  
by V. Dubchak, 4 pp.

15 Feb 1962.  
Developments in the Maritime Fleet,  
by Yu. Savinov, 8 pp.

Plans for River Navigation in 1962,  
by R. Belousov, 8 pp.

USSR  
Economic (Contd)

The Tasks of Heavy Machine-Building  
During the Period of Building of a  
Material-Technical Base of Communism,  
by K. Vinogradov, 26 pp.  
RUSSIAN, per, Voprosy Ekon, No 1, 1962,  
pp 30-38.

JPRS 14442

Certain Quantitative Relationships in  
the Production Scheme, by V. Nemchinov,  
22 pp.  
RUSSIAN, per, Voprosy Ekon, No 2, 1962,  
pp 100-113.

JPRS 14141

Review of Book on Collective Form of  
Wages in Industry, by N. Maslova, 6 pp.  
RUSSIAN, per, Voprosy Ekon, No 2, 1962,  
pp 140-142.

JPRS 14229

The Tasks of Studying the Historical  
Experience of Socialist Construction  
in the USSR in the Light of the  
Decisions of the 22nd Congress of  
the CPSU, by M. P. Kim, 25 pp.  
RUSSIAN, per, Voprosy Istorii, No 3,  
Feb 1952, pp 3-19.

JPRS 14352

Selected Articles From the Russian  
Periodical Za Rulem.

No 9, 1961, p 19.  
Soviet Racing Motorcycles, by  
B. Karmanov, 10 pp.

JPRS 14421

No 10, 1961.  
New Motorcycle Models, by V. Rogozhin,  
19 pp, (pp 8-11).

JPRS 14421

The Lightweight, All-Purpose  
"Tselina Farm Truck, by B. Fitterman,  
6 pp, (pp 12, 13).

JPRS 14465

The Modernized Kraz Heavy-Duty Trucks,  
by N. M. Chistov, 5 pp, (p 14).

JPRS 14465

USSR  
Economic (Contd)

Selected Articles From the Russian  
Periodical Za Rulem. (Contd)

- No 11, 1961, pp 24, 25.  
New Developments in Electric  
Automotive Accessories, 5 pp. JPRS 14185
- No 12, 1961, pp 14, 15.  
The Motorcycles of the Near  
Future, by V. Kovalenko, 6 pp. JPRS 14421
- No 1, 1962.  
The Modernized Laz Buses, by  
K. M. Atoyan, 7 pp, (pp 11-13). JPRS 14465
- The Conference of Workers of  
the Motorcycle Industry, 11 pp,  
(pp 14, 15). JPRS 14421
- No 1, 1962, pp 25, 26;  
No 2, 1962, pp 18, 19.  
Tendencies in Development of  
Electrical Equipment of Motor  
Vehicles, by S. P. Bannikov, 13 pp. JPRS 14185
- No 2, 1962, pp 15-17.  
The Kraz-250 Truck, by N. Chistov,  
9 pp. JPRS 14465

USSR  
Political

The 22nd Congress of the CPSU and the Tasks of the Philological Sciences, by V. V. Vinogradov, 27 pp.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Literatura i Yazyka, Vol XXI, No 1, Jan/Feb 1962, pp 3-13.

JPRS 14391

The Material-Technical Base of Communism and the Science of Polymers, by V. A. Kargin, P. V. Kozlov, 10 pp.  
RUSSIAN, per, Nauch Dok Vysshey Shkoly Filosofiskiye Nauki, No 2, 1962, pp 33-41.

JPRS 14238

Science-A Powerful Weapon for the Builders of Communism, 21 pp.  
RUSSIAN, np, Pravda, 17 Nov 1961, p 3, Cols 1-6. 9677367

FTD-TT-62-83

Consular Agreement Between the Union of Soviet Socialist Republics and the Austrian Republic, 22 pp.  
RUSSIAN, per, Vedomosti Verkhovnogo Soveta Soyuza Sovetskikh Sotsialisticheskikh Respublik, No 2, 1960, pp 6-14.

JPRS 14439

Spiridonov's Removal as Leningrad Party Secretary. A West German Editor's Analysis, by Carl Gustaf Stroehm, 5 pp.  
GERMAN, np, Christ und Welt, Vol XV, No 18, 4 May 1962, p 1.

JPRS 13829

**USSR**  
**Military**

How Best to Approach the Target,  
by F. Neymark, 4 pp.  
RUSSIAN, per, Kryl'ya Rodiny, Jun 1961,  
p 5, 22. 9677337

FTD-TT-62-403

The ABC's of the Pentagon, by  
G. Sh., 4 pp.  
RUSSIAN, per, Nauchno-Tekh Obshch SRS,  
No 2, 1962, pp 56-57.

JPRS 14200

Planting in a Test Tube, by L. Vasil'yev,  
4 pp.  
RUSSIAN, per, Nauchno-Tekh Obshch SRS,  
No 2, 1962, pp 60-61.

JPRS 14200

**Geographic**

The Area Around Moscow, by A. A. Mints,  
63 pp.  
RUSSIAN, bk, Podmoskov'ye, 1961.

JPRS 14365

Compilation of Agricultural Maps and  
Atlases, 145 pp.  
RUSSIAN, bk, Sovetskiye Sel'skokhoz  
Karty i Atlasy, 1959, pp 40-103.

JPRS 14364

Tourist Routes for Novgorodskaya Oblast,  
by A. I. Semenov, 52 pp.  
RUSSIAN, bk, Turistski'ye Marshruty  
po Novgorodskoy Oblasti, 1961, pp 1-80.

JPRS 14458

USSR  
Geographic (Contd)

Selected Articles From the Russian  
Periodical Iz Imperatorskago Russkago  
Geograf Obshch.

ACIC

Vol XXXVII, No 3, 1901, pp 225-229.  
Geographical Works on the Eastern  
Slopes of the Urals, by R. Savel'yev.

Vol XLVIII, No 1-5, 1912.  
List of Elevations in the Sayanskije  
Mountains, Uryankayskiy Kray and  
Minusinsk Okrug, Determined in  
1907-1910 by the Chief of the Trans-  
portation Party, Exploring the Upper  
Yenisey System, by Vs. Rodevich,  
(pp 171-188).

Methods for Performing Route Surveys  
and Working Conditions in the Coastal  
Regions on the Arctic Ocean, by  
M. Kozhevnikov, (pp 343-355).

Vol LIV, No 1, 1918, pp 121-130.  
The Conduct of Topographic -  
Geodetic Operations on the Shore  
of Kol'skiy Bay for the Construction  
of the City of Murmansk, by  
B. V. Savanin.

The Geology of Novaya Zemlya and  
Vaigach Islands, by K. K. Demokidov,  
B. S. Romanovich, 64 pp.  
RUSSIAN, per, Trudy Nauchno-Issled  
Inst Geolog Arktiki, Min Geol i  
Okrhany Nedr SSR, 1957.

MEB

The Kolyma Geological Expedition  
1929-1930, by K. Salishchev,  
(Vol II, Part 1).  
RUSSIAN, per, Trudy Soveta po  
Izucheniyu Proizvoditel'nykh Sill,  
Ser Yakutskaya, Ak Nauk SSSR,  
Vol XVII, 1934.

ACIC

USSR  
Sociological

Clubs and Houses of Culture of Moscow,  
by A. Granitov, V. Sukhanov, (DC-6915).  
RUSSIAN, bk, Kluby i Doma Kul'tury  
Moskvy, 1961, pp 1-251.

\*JPRS

The Experience of Applying Some  
Physiological Methods of Research  
for Hygienic Evaluation of Agricultural  
Labor of School Children, by  
I. D. Dubinskaya, V. K. Kuz'mina, 9 pp.  
RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 28-33.

JPRS 14345

Hygienic Problems During the Study of  
the Effect of an Increased Natural  
Radioactive Background of the Environ-  
ment on the Health of the Population,  
by Yu. V. Novikov, 11 pp.  
RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 76-84.

JPRS 14345

Problems of the Development of Science  
and Higher Education, by V. A.  
Ambartsumyan, 7 pp.  
RUSSIAN, np, Kommunist, No 277 (8367),  
1 Dec 1961, p 2.

JPRS 14242

Selected Articles From the Russian  
Periodical Sovet Pedagogika, No 10,  
1961.

JPRS 14358

Educational Content in the Secondary  
School, by E. I. Monoszon, 19 pp,  
(pp 29-39).

Five Years of Work by Boarding  
Schools, by M. N. Kolmakova, 11 pp,  
(pp 53-60).

Educational Work in Schools for  
Young Industrial and Agricultural  
Workers, by K. A. Ivanovich, 10 pp,  
(pp 88-94).

USSR  
Sociological (Contd.)

Selected Articles From the Russian  
Periodical Sovet Pedagogiya, No 10,  
1961. (Contd)

JPRS 14358

Academic Research by Departments  
of Pedagogy and Psychology --  
Decisive Prerequisites in Raising  
the Standard of Teacher Preparation,  
by V. T. Petrikov, 15 pp, (pp 117-126).

Conference on Educational and  
Upbringing Work in the School, by  
N. Indik, 6 pp, (pp 152-154).

Inter-Higher Educational Institution  
Conference on the Education and  
Upbringing of Children in Boarding  
Schools, by V. A. Prosetskiy, 3 pp,  
(pp 154-155).

The Tasks of the Academy of Medical  
Science, USSR, in the Light of  
Decisions of the 22nd Congress, by  
N. N. Blokhin.  
RUSSIAN, per, Vest Ak Medit Nauk SSSR,  
No 4, 1962, pp 7-15.

\*FTD-TT-62-963

USSR  
Biographic

Biographies of Soviet Scientists, 12 pp.  
RUSSIAN, periodicals, 1961.

JPRS 14138

Biographies of Soviet Scientists,  
30 pp.  
RUSSIAN, np, per, 1961/1962.

JPRS 14489

Aleksandr Mikhaylovich Markov, The  
60th Anniversary of the Day of His  
Birth, by A. M. Markov, 3 pp.  
RUSSIAN, per, Klin Med, Vol XL, No 1,  
1962, pp 3-14.

JPRS 14230

USSR Supreme Soviet Awards to Out-  
standing Teachers, 390 pp.  
RUSSIAN, per, Vedomosti Verkhovnogo  
Sovets Soyuza Sovetskikh Sotsialist-  
icheskikh Respublik, No 39 (1074),  
27 Sep 1961, pp 920-1075.

JPRS 14290

EASTERN EUROPE

Economic

Planning and Finance During the Building of Socialism, by Detelin Markov, 14 pp.

BULGARIAN, per, Ikonomicheska Misul, No 3, 1962, pp 3-13.

JPRS 14338

Economic Cooperation Among Socialist Countries, by K. I. Vorob'ova, 13 pp.

BULGARIAN, per, Ikonomicheska Misul, No 3, 1962, pp 58-70.

JPRS 14314

Proper Use of the Soil, by Khristo Kunchev, 14 pp.

BULGARIAN, per, Planovo Stopanstvo i Statistika, No 4, 1962, pp 31-43.

JPRS 14400

Improving the System of Indicators for Planning of Agriculture, by Kalcho Kalchev, 12 pp.

BULGARIAN, per, Planovo Stopanstvi i Statistika, Vol XVII, No 4, 1962, pp 57-64.

JPRS 14328

Prospects of the Bulgarian Chemical Industry, by Aleksi Kuzmanow, 8 pp.

BULGARIAN, per, Przemysl Chemiczny, Vol XL, No 11, 1961, pp 613-615.

JPRS 14367

Trade Between Bulgarian and the USSR in 1962, by Dimitur Dyankov, 4 pp.

BULGARIAN, per, Vunshna Turgoviya, Vol X, No 3, 1962, pp 1-3.

JPRS 14366

Rumanian Foreign Trade and Economic Ties, by Ion Melchoyu, 14 pp.

BULGARIAN, per, Vunshna Turgoviya, Vol X, No 3, 1962, pp 16, 17.

JPRS 14366

Bulgarian Trade Agreement With Ceylon, 4 pp.

BULGARIAN, per, Vunshna Turgoviya, Vol X, No 3, 1962, pp 25, 26.

JPRS 14366

Eastern Europe  
Economic (Contd)

- Practices Jeopardizing the Export-  
Import System, by N. Kordun, 6 pp.  
CROATIAN, per, Ekonomска Politika,  
Vol XI, No 528, 1962, pp 576-577. JPRS 14314
- The Tasks of the Leather, Rubber, Glass,  
and Household Goods Industries in  
1962, by Ion Moldovan, 10 pp.  
CROATIAN, per, Industria Usuara,  
Vol IX, No 4, 1962, pp 121-124. JPRS 14339
- Yugoslav Foreign Trade With  
Bulgarian, by O. M. 5 pp.  
CROATIAN, per, Nedlejni Komentari,  
Vol VII, No 286, 25 Apr 1962, pp 460-463. JPRS 14314
- Problems in Yugoslav Foreign Trade,  
by M. Aleksic, 6 pp.  
CROATIAN, per, Nova Trgovina, No 4,  
1962, pp 147-149. JPRS 14314
- The Yugoslav Hydrometeorological Service  
and Industry, by Petar V. Koscevic,  
27 pp.  
CROATIAN, per, Technicki Pregled,  
Vol XIV, No 2, pp 55-60. JPRS 14423
- Economic Development of CEMA Countries  
in 1961, 41 pp.  
CZECH, per, Hospodarske Zpravy ze  
Zahraniaci, No 50-51, 28 Apr 1962,  
pp 3-6. JPRS 14426
- Development of Diesel Locomotives of  
CKD Line, by A. Kosian, 8 pp.  
CZECH, per, Storjirenstvi, No 10,  
1961, pp 787-791. ACSI I-1492  
ID 2198555
- Work Organization and Profitability in  
the East German Foreign Trade Enterprise,  
by H. Wienkoop, 16 pp.  
GERMAN, per, Der Aussenhandel, No 7,  
1962, pp 9-13. JPRS 14254

Eastern Europe  
Economic (Contd)

Selected Articles From the German  
Periodical Deutsche Finanzwirtschaft,  
Vol XVI, No 7,

JPRS 14338

Further Work in the Field of  
Prices, by Helmut Loewe, 11 pp,  
(pp 5-8, 22).

Some Basic Problems in Long-Range  
Financial Planning, by Friedmar John,  
Erhard Vogel, 10 pp, (pp 11-14).

Changed Rate of Cash Circulation in  
Rural Areas, by Waltraut Ladensack,  
7 pp, (pp 18-20).

Preparations for Revaluation of Basic  
Assets, by Helga Tschenschner, 6 pp,  
(pp 25-27).

Selected Articles From the German  
Periodical Die Deutsche Landwirtschaft.

Vol XIII, No 5, 1962.  
Status of Agricultural Aviation in  
the GDR and Its Principal Tasks  
for 1962, by W. Gorzel, 8 pp,  
(pp 220-222).

JPRS 14263

Successes and Experiences in Field  
Spraying in 1961, by F. Klatt,  
10 pp, (pp 235-237).

Grassland Improvement and Increased  
Milk Production, 17 pp, (pp 238-243).

No 6, 1962, pp 276-279.  
The Work of Specialist Troupes and the  
Missions of Consultations Stations,  
by R. Bierstadt, 8 pp.

JPRS 14400

**Eastern Europe  
Economic (Contd)**

People's Chamber Decision on the  
1962 Economic Plan, by Walter Ulbricht,  
15 pp.

GERMAN, per, Gesetzblatt der  
Deutschen Demokratischen Republik,  
Part I, No 3, 31 Mar 1962, pp 29-34.

JPRS 14338

Law on the 1962 State Budget, by  
Walter Ulbricht, 21 pp.

GERMAN, per, Gesetzblatt der Deutschen  
Demokratischen Republik, Part I,  
No 3, 1962, pp 34-41.

JPRS 14338

The East German Customs Laws, by  
Walter Ulbricht, 15 pp.

GERMAN, per, Gesetzblatt der Deutschen  
Demokratischen Republik, Part I, No 3,  
1962, pp 42-47.

JPRS 14338

Influence of Bloc Integration on Poland's  
Economy, 4 pp.

GERMAN, per, Handelsblatt, Supplement to  
Aussenhandelsusgabe, 14 May 1962.

JPRS 14254

Topographical Effect on the Design and  
Operation of Soviet Railroads, by  
Wolfgang Doerschel, 10 pp.

GERMAN, per, Der Operative Dienst,  
No 2, 1962, pp 57-60.

JPRS 14266

Chamber of Technology, Organizer of  
Socialist Work Team Work, 7 pp.

GERMAN, np, Presse-Informationen,  
No 61, 25 May 1962, pp 3, 4.

JPRS 14296

Accomplishments in Self Sufficiency  
Achieved Along With the Production  
Quotas by the Veb Mathias Thesen  
Shipyard at Wismar, by Bartmann, Krause,  
5 pp.

GERMAN, per, Schiffbau Technik, Vol V,  
May 1962, pp 217-218.

JPRS 14344

Eastern Europe  
Economic (Contd)

Plant Comparisons in the Shipbuilding Activities of the German Democratic Republic, by O. Koehler, 8 pp.  
GERMAN, per, Schiffbau Technik, Vol V, May 1962, pp 219-222.

JPRS 14344

Development of the Plasma Burner, 4 pp.  
GERMAN, per, Technische Gemeinschaft, No 5, 1962, pp A 26, 28.

JPRS 14344

National Income and Foreign Trade Under Socialism, by Heinz Brass, 141 pp.  
GERMAN, per, Verlag Die Wirtschaft, 1961, 148 pp.

JPRS 14207

Development of the CEA Economies in 1961, by G. Huber, P. Sydow, 16 pp.  
GERMAN, per, Die Wirtschaft, 11 Apr 1962, p 13, 18 Apr 1962, p 13.

JPRS 14338

Balance of Monetary Relationships in the Economy, by Helmut Egerland, 33 pp.  
GERMAN, per, Wirtschaftswissenschaft, Vol X, No 5, 1962, pp 671-690.

JPRS 14338

East German 1961-1962 Budgets, 6 pp.  
GERMAN, per, Wochenbericht, No 19, 11 May 1962, pp 83, 84.

JPRS 14338

The Demands of the Energy Industry on the Development of Some Products of the Heavy Current Industry, by Laszlo Papp, 13 pp.  
HUNGARIAN, per, Elektrotechnika, Vol LV, No 4, 1962, pp 133-138.

JPRS 14429

Hungarian Practices in Processing of Glass Fiber-Reinforced Polyesters, by Kopa Janos, 14 pp.  
HUNGARIAN, per, Gepyartas Technologia, Vol II, No 3, 1962, pp 84-91.

JPRS 14248

Eastern Europe  
Economic (Contd)

Solution of Problems of Instrumentation and Automation in the Ajka Light Metal Foundry, by Imre Bartak, 22 pp.

HUNGARIAN, per, Kohaszati Lapok, Vol XCV, No 4, 1962, pp 91-96.

JPRS 14248

Improving the Performance of Hungarian Blooming Mills, by Laszlo Pohl, 30 pp.

HUNGARIAN, per, Kohaszati Lapok, Vol XCV, No 4, 1962, pp 145-152.

JPRS 14248

Use of Natural Gas in the Field of Metallurgy, by Ede Nedea, 19 pp.

HUNGARIAN, per, Kohaszati Lapok, Vol XCV, No 4, 1962, pp 175-179.

JPRS 14248

Some Foreign Trade Aspects of the Supply of Raw Materials for Production, by Gyorgy Tallos, 19 pp.

HUNGARIAN, per, Kozgazdasagi Szemle, Vol IX, No 2, 1962, pp 153-170.

JPRS 14366

Cost Variations in Hungarian Coal Mining, by Zoltan Forgach, 19 pp.

HUNGARIAN, per, Kozgazdasagi Szemle, Vol IX, No 4, 1962, pp 441-545.

JPRS 14369

The Second Five-Year Plan for Sea and River Shipping, by Joseph Belay, 13 pp.

HUNGARIAN, per, Kozlekedesi Kozlony, Vol VIII, No 16, 22 Apr 1962, pp 262-267.

JPRS 14330

Hungarian Participation in the International Geophysical Year, by Antal Tarczy-Hornoch, 8 pp.

HUNGARIAN, per, Magyar Tudomany, Vol VII, No 2, 1962, pp 87-95.

JPRS 14282

Eastern Europe  
Economic (Contd)

National Long-Range Research Plan of Hungary, by Tibor Erdey-Gruz, 25 pp.  
HUNGARIAN, per, Magyar Tudomany, Vol VIII, No 4, 1962, pp 203-224.

JPRS 14212

Miniaturization at the Hungarian Measuring Instruments Factory, by Gyorgy Zoltanin, 4 pp.  
HUNGARIAN, per, Meres es Automatike, Vol X, No 2, Feb 1962, pp 62-64.

JPRS 14248

Development of the Production of Automatic Components, by Bela Borbely, 4 pp.  
HUNGARIAN, per, Meres es Automatika, Vol X, No 4, 1962, pp 127, 128.

JPRS 14429

Milk Production and Purchasing in Hungary, by Lajos Laszlo, 9 pp.  
HUNGARIAN, per, Statisztikai Szemle, Vol XL, No 4, 1962, pp 384-391.

JPRS 14215

Economic Situation of the Fishermen's Cooperatives in Hungary, by Jozsef Orsy, 8 pp.  
HUNGARIAN, per, Statisztikai Szemle, Vol XL, No 4, 1962, pp 392-397.

JPRS 14215

Unification of Agricultural Statistical Indices Among CEMA Nations, by Bela Fazekas, 5 pp.  
HUNGARIAN, per, Statisztikai Szemle, Vol XL, No 4, 1962, pp 419-421.

JPRS 14215

Outlook on Sino-Soviet Economic Cooperation, 23 pp.  
JAPANESE, per, Ajia Kenkyu, No 315, 14 Apr 1962, pp 2-10; No 316, 24 Apr 1962, pp 2-9.

JPRS 14351

Touristic Waters of Poland, by Bronislaw Jastrzebski.  
POLISH, rpt, Turystyczne Szlaki Jodne Polski, 1960, 782 pp.

\*ACSI I-1639  
ID 2201428

Eastern Europe  
Economic (Contd)

Polish Shipbuilding Industry in 1961  
and Future Plans, by Stanislaw Nowicki,  
9 pp.

POLISH, per, Budownictwo Okretowe,  
No 1, 1962, pp 1-3.

JPRS 14248

Problems Concerning Increased  
Production and Utilization of Mineral  
Fertilizers, by Tadeusz Stobiecki,  
14 pp.

POLISH, per, Chemik, No 3, 1962,  
pp 80-86.

JPRS 14430

Organizational Problems in Reducing  
Electric Power Losses, by Bronislaw Lis,  
11 pp.

POLISH, per, Energetyka, No 3, Mar 1962,  
pp 65-70.

JPRS 14367

The State Budget for 1962, by  
Jerzy Albrecht, 29 pp.

POLISH, per, Finanse, Vol XIII, No 1,  
1962, pp 1-19.

JPRS 14186

Selected Articles From the Polish  
Periodical Gospodarka Planowa.

No 1, 1962.  
Preliminary Evaluation of Results  
of 1 Jul 1960 Price Reform, by  
Juliusz Struminski, 11 pp, (pp 8-11).

JPRS 14186

Influence of 1 July 1960 Price Reform  
on Branch Industry, by Jewxy  
Kowalski, 8 pp, (pp 12-14).

JPRS 14186

Shortcomings in Construction Material  
Management and Remedies, by  
Miron Pomianowski, 4 pp, (pp 54-55).

JPRS 14342

**Eastern Europe**  
**Economic (Contd)**

**Selected Articles From the Polish  
Periodical Gospodarka Planowa. (Contd)**

No 4, 1962.

Main Tasks of the Construction  
Materials Industry in 1962, 7 pp,  
(pp 1-3).

JPRS 14342

General Proportions of National  
Income Created and Distributed in  
1956-1960, by Wladyslaw Rogozinski,  
20 pp, (pp 4-10).

JPRS 14186

Income of the Rural Population in  
1956-1960, by Adam Szynkarczuk,  
19 pp, (pp 11-16).

JPRS 14186

**Selected Articles From the Polish  
Periodical Handel Zagraniczny.**

JPRS 14366

No 1, 1962.

Polish Foreign Trade Problems  
Encountered by the 1962 Plan and  
Budget, by Posel Jerzy Olszewski,  
6 pp, (pp 5-8).

Development of Investment Exports  
and Technical Progress Plans, by  
Henryk Piklikiewicz, 9 pp, (pp 10-13).

Agreements as a Basis for Polish  
Foreign Trade With Socialist Countries  
in 1961-1965, by Jozef Lysenko, 4 pp,  
(pp 30, 31).

No 4, 1962.

New Tasks for Polish Foreign Trade,  
by Witold Trabczynski, 10 pp, (pp 147-150).

Bright and Dark Sides of Chemical  
Exports, by Jezzy Turonek, 5 pp,  
(pp 151-153).

Export Policy in Machinery Enter-  
prises, by Klemens Bialecki, 9 pp,  
(pp 153-157).

Eastern Europe  
Economic (Contd)

Selected Articles From the Polish  
Periodical Miasto.

- Vol XIII, No 1, 1962, pp 27-29.  
The Problems of Urban Development  
and Geodesy, by Stanislaw Parczynski,  
6 pp. JPRS 14333
- No 2, 1962.  
Cooperative Housing Construction in  
1962, by Maria Jerczynska, 11 pp,  
(pp 25-28). JPRS 14208
- Cooperative Housing Construction in  
1961, by Henryk Dabkowski, 3 pp,  
(p 36).
- Vol XIII, No 4, 1962, pp 33-35.  
Execution of Investment Plan for  
Communal Economy in 1961, by  
R. Ukleja, 7 pp. JPRS 14186
- Polish Electric Power in 1960 Against  
the Background of the Last Five-Year  
Plan, 10 pp.  
POLISH, per, Przeglad Elektrotechniczny,  
No 6, 1961, pp 257-259. JPRS 14369
- Domestic Production of Earth-Moving  
Machinery for Brown Coal Open Pit  
Mining, by Roman Sobolski,  
Henryk Hawrylak, 15 pp.  
POLISH, per, Przeglad Mechaniczny,  
No 7, 1962, pp 193-197. JPRS 14367

Eastern Europe  
Economic (Contd)

Selected Articles From the Polish  
Periodical Przeglad Techniczny.

- No 6, 7 Feb 1962, p 5. JPRS 14248  
Implementing the Resolutions of  
the Fourth Congress of Polish  
Technicians, by Ryszard Gdulewski,  
3 pp.
- No 18, 6 May 1962, p 5. JPRS 14186  
Economic Development and Investment  
in the Polish Northern and Western  
Territories, by Czeslaw Pilichowski,  
5 pp.
- No 19, 13 May 1962, pp 1, 4. JPRS 14342  
Technical Progress in the Refractory  
Materials Industry, by Janusz  
Niemczynowicz, 4 pp.
- No 20, 20 May 1962. JPRS 14367  
Interviews of the Minister of  
Shipping on Ports, Fleet and Ship-  
yards, by Adam Bronikowski, 6 pp,  
(pp 1, 3).
- The Mechanical Works "Zamech" in  
Elbag, by Miroslav Dymczak, 4 pp,  
(p 6). JPRS 14367
- Development of Refrigeration in  
Retail Food Trade, by Inzynier Wacław  
Byszewski, 5 pp, (p 9). JPRS 14208
- No 21, 27 May 1962, p 9. JPRS 14369  
Scrutiny of Materials Investments in  
Industry, by Stefan Czarnowski,  
M. Szczecin, 11 pp.

**Eastern Europe  
Economic (Contd)**

**Selected Articles From the Polish  
Periodical Przemysl Chemiczny.**

- Vol XL, No 11, 1961.  
The Great Coals of Chemistry,  
by Jerzy Gydnia, 8 pp, (pp 611-613). JPRS 14367
- Advances in the Synthetic Rubber  
Production of Czechoslovakia, by  
Rudolf Evanzin, 6 pp, (pp 618, 619).
- Difficulties of Automation in the  
Chemistry Industry, by K. F. Heller,  
10 pp, (pp 621-624).
- Vol XLI, No 4, 1962, pp 220, 221.  
Production Economy in Products and  
Raw Materials, 6 pp. JPRS 14369
- No 5, 1962.  
Tasks and Rights of Engineers and  
Technicians in Work Standardization in  
the Chemical Industry, by Henryk  
Slawecki, Julian Wojtowicz, 8 pp,  
(pp 229-231). JPRS 14430
- Attempt at Economic Estimation of  
the Use of Triple Superphosphate  
in Poland, by Jerzy Dankiewicz,  
Romuald Pawlenty, 6 pp, (pp 231-233).
- Tenth Anniversary of the Nonferrous Metals  
Institute, by Waclaw Czachorski, 6 pp.  
POLISH, per, Rudy i Metale Nielazne,  
No 3, 1962, pp 88-91. JPRS 14342
- Activities of the Nonferrous Metals  
Institute, by Jerzy Adamiczka, 23 pp.  
POLISH, per, Rudy i Metale Nielazne,  
No 3, 1962, pp 91-100. JPRS 14342
- New Zinc Smelting Plant, by Stanislaw  
Kawinski, 8 pp.  
POLISH, per, Rudy i Metale Nielazne,  
Vol VII, No 5, 1962, pp 205-208. JPRS 14342

Eastern Europe  
Economic (Contd)

Polish Foreign Trade Statistics for  
1960-1961, 11 pp.

POLISH, per, Statistics Bulletin,  
Handel Zagraniczny, No 1, 1962,  
pp 22-26.

JPRS 14366

Problems of Constructing Aviation  
Equipment, by E. Staniewski, 9 pp.  
POLISH, per, Wojskowy Przeglad  
Lotniczyn, 1961, pp 15-20. 9677335

FTD-TT-62-405

Organization and Function of the  
Ministry of Domestic Trade, 4 pp.  
RUMANIAN, per, Buletinul Oficial al  
Marii Adunari Nationale, Vol XI, No 9,  
30 Apr 1962, pp 65-67.

JPRS 14330

The Establishment, Organization, and  
Function of the Ministry of Foreign  
Trade in Rumania, by Gheorghe  
Gheorghiu-Dej, 3 pp.  
RUMANIAN, per, Buletinul Oficial al  
Marii Adunari Nationale, Vol XI, No 9,  
30 Apr 1962, pp 67, 68.

JPRS 14254

Organization of Trade Management, 4 pp.  
RUMANIAN, per, Comertul Socialist,  
Vol VII, No 16, 22 Apr 1962, pp 1, 3.

JPRS 14330

Plans for Increased Industrial Construction,  
by Gabriel Furduiescu, 4 pp.  
RUMANIAN, per, Constructorul, Vol XIV,  
No 640, 14 Apr 1962, pp 1, 2.

JPRS 14330

**Eastern Europe  
Economic (Contd)**

**Selected Articles From the Rumanian  
Periodical Finante si Credit.**

Vol VIII, No 2, 1962, pp 17-32.  
Execution of the State Budget,  
by M. Diamandopoi, 18 pp.

JPRS 14186

Vol VIII, No 3, 1962.  
Plans of the Investment Banks for  
the Year 1962, by Al. Pintea, 15 pp,  
(pp 3-13).

JPRS 14296

Internal Reserves From Heavy Industry  
in Rumania, by Aureliu Petrescu,  
15 pp, (pp 14-28).

JPRS 14344

Vol VIII, No 4, 1962.  
Elimination of Surplus Stocks and  
Prevention of Their Accumulation, by  
I. Lucaci, 9 pp, (pp 3-10).

JPRS 14329

Fulfillment of National Income Plans,  
by I. Georgescu, 13 pp, (pp 11-21).

JPRS 14329

Analysis of Plan Fulfillment by the  
Auto Transport Industry, by Traian  
Drutia, 11 pp, (pp 42-50).

JPRS 14330

Measures for Collection of Funds for  
Local Budgets, by A. Popper, 5 pp.  
RUMANIAN, per, Gazeta Finantelor,  
Vol X, No 462, 16 May 1962, pp 1, 8.

JPRS 14329

Bank Control Over Agricultural Investments,  
by Alexandru Roman, 5 pp.  
RUMANIAN, per, Gazeta Finantelor, Vol X,  
No 480, 28 Apr 1962, p 5.

JPRS 14329

Budgetary Discipline, 4 pp.  
RUMANIAN, per, Gazeta Finantelor, Vol X,  
No 459, 25 Apr 1962, pp 1, 4.

JPRS 14329

Eastern Europe  
Economic (Contd)

The Organization and Improvement of Material Supply in the Food Industry, by O. Clej, 12 pp.

RUMANIAN, per, Industria Alimentara, Vol XIII, No 4, 1962, pp 97-102.

JPRS 14328

Standardization as an Aid in the Introduction of New Techniques and the Improvement of Quality in Light Industry, by Raoul Masif, 12 pp.  
RUMANIAN, per, Industria Usoara, Vol IX, No 3, 1962, pp 81-86.

JPRS 14330

National Income During the Period of Socialist Construction, by Ion Ravar, 19 pp.

RUMANIAN, per, Lupta de Clasa, Vol XLII, No 4, 1962, pp 15-27.

JPRS 14329

Development of Agriculture in the Rumanian People's Republic as Reflected in Statistical Data, by C. Grigorescu, 11 pp.

RUMANIAN, per, Lupta de Clasa, No 4, 1962, pp 106-111.

JPRS 14400

Plans for Combatting Insect Damage to Forests, by Stefan Sassu, 4 pp.

RUMANIAN, per, Muncitorul Forestier, Vol XIV, No 419, 12 Apr 1962, pp 1, 4.

JPRS 14328

Advance Cash Payments, an Important Means of Increasing Collectivists' Material Incentive in the Development of Agricultural Production, by I. Matey, M. Bota, et al, 10 pp.  
RUMANIAN, per, Probleme Economic, Vol XV, No 4, 1962, pp 47-54.

JPRS 14328

**Eastern Europe  
Economic (Contd)**

CEMA Activities in the Field of Construction, 3 pp.

RUMANIAN, per, Revista Constructiilor si a Materialelor de Constructii, Vol XIV, No 4, 1962, p 216.

JPRS 14330

Scientific-Methodological Activities of the Central Directorate of Statistics, 8 pp.

RUMANIAN, per, Revista de Statistica, No 11, 1962, pp 81-83.

JPRS 14296

Economic Consequences of Tuberculosis, by Borivoje Sirovica, Ruzica Todorovic, 9 pp.

SERBIAN, per, Socijalna i Zdravstvena Politika, No 3/4, 1962, p 9-15.

JPRS 14288

Investments in the Construction Materials Industry, by M. Tomic, 5 pp.

SERBIAN, per, Vesnik Jugoslovenski Investicione Banke, Vol VI, No 63, Mar 1962, pp 5-6.

JPRS 14342

Eastern Europe  
Political

Some Current Topics in the Communist Movement in the West, by Zorica Prikilmajer-Tomanovic, 7 pp.  
CROATIAN, per, Nasa Stvarnost, No 3, 1962, pp 327-333.

JPRS 14286

Letters Discussing Indonesian-Yugoslav Trade-Union Relations, 11 pp.  
CROATIAN, np, Rad, No 20, 12 May 1962.

JPRS 14176

Kolisevski Discusses Economic Development of Yugoslav Macedonia, by Lazar Kolisevski, 10 pp.  
SERBO-CROATIAN, np, Borba, 23 Jun 1962.

JPRS 14456

Military

Principles of Medical Defense Against Atomic, Bacteriological, and Chemical Warfare, by Iv. Nikolov.  
BULGARIAN, bk, Osnovi na Mediko Sanitarnata Zashtita, 1959, pp 207-316, 319-366.

\*JPRS

Regulation Implementing the Decree on the Regular Military Service of Sub-surface Miners, 4 pp.  
BULGARIAN, per, Izvestiya na Presidiuma na Narodnoto Subrainie, No 41, 22 May 1962, pp 1-2.

JPRS 14368

Order on the Establishment of a Pension Supplement to Military Insurants, 3 pp.  
CROATIAN, per, Sluzbeni List, No 22, 30 May 1962, pp 398-399.

JPRS 14368

Order on the Establishment of a Pension Supplement to Internal Security Officers, 3 pp.  
CROATIAN, per, Sluzbeni List, No 22, 20 May 1962, pp 399-400.

JPRS 14368

Eastern Europe  
Military (Contd)

The Future of Transport (Passenger)  
Aircraft, by J. Cervenka, 10 pp.  
CZECH, per, Kridla Vlasti, 11 Apr  
1961, pp 14-16. 9677364

FTD-TT-62-397

New Air Defense Weapons, 4 pp.  
CZECH, per, Obrana Lidu, 8 Apr 1962,  
pp 1-2.

JPRS 14368

Order Concerning the Blood Donor and  
Transfusion Service Dated 7 March 1962,  
13 pp.  
GERMAN, per, Gesetzblatt der Deutschen  
Demokratischen Republik, Part II, No 18,  
3 Apr 1962, pp 158-165.

JPRS 14368

New Methods of Missile Interception, 5 pp.  
HUNGARIAN, per, Repules, No 1, 1962,  
pp 10, 11. 9677368

FTD-TT-62-612

A Surprise War, by Tadeusz Pioro,  
4 pp.  
POLISH, np, Polityka, 21 Apr 1962,  
OUSARMA, Poland Encl to R-278-62.

ID 2201858

Illuminating Sea Target With Sab  
Bombs, by Kazimierz Borawski, 6 pp.  
POLISH, per, Przeglad Morski, No 4,  
1962, pp 12-16.

JPRS 14368

Graphic Planning of Refuelling at  
Seas, by Jan Madejski, 5 pp.  
POLISH, per, Przeglad Morski, No 4,  
1962, pp 17-22.

JPRS 14368

Progress in Sports Aviation, 17 pp.  
POLISH, per, Skrzydlata Polska, No 3<sup>4</sup>,  
20 Aug 1960, pp 3, 4, 5, 6, 11, 12, 13.

JPRS 14368

Jet Training Aircraft, by Z. Jankiewicz,  
9 pp.  
POLISH, per, Skrzydlata Polska, No 3 (549),  
1962, pp 8, 9. 9677370

FTD-TT-62-400

Eastern Europe  
Military (Contd)

- Optimum Flight Conditions During  
Vectoring, by A. Tarasienkow, 15 pp.  
POLISH, per, Wojskowy Przeglad Lotniczy,  
Sep 1961, pp 14-23. 9677377 FTD-TT-62-406
- Soviet Fighter Aircraft, by J. Tyszowski,  
17 pp.  
POLISH, per, Wojskowy Przeglad Lotniczy,  
Nov 1961, pp 40-53. 9677359 FTD-TT-62-398
- Defeating Military Air Defense by  
Bombers, by Cz. Gagajek, 10 pp.  
POLISH, per, Wojskowy Przeglad Lotniczy,  
Vol XVI, No 3, 1962, pp 14-22. JPRS 14368
- Political Work During Tactical Exercises,  
by Wl. Oliwa, 22 pp.  
POLISH, per, Zolnierz Wolnosci, Vol XIII,  
No 131, 6 Jun 1962, pp 3-4. JPRS 14368

Geographic

- New Map of Bulgaria, by A. P. Kozak.  
RUSSIAN, bk, Informatisionno-  
Tekhnicheskij Sbornik Nauchno Issled-  
oratel'skogo i Isputatel'nogo Poligona,  
Voyenne Topographiceskoy Sluzhby  
Krasnoy Armii, Vol II, 1940, pp 50-53. ACIC

Eastern Europe  
Sociological

Composition of the Yugoslav Cadre of  
Physicians, 12 pp.  
CROATIAN, per, Jugoslovenski Pregled,  
No 3, 1962, pp 131-136.

JPRS 14280

Survey of International Contacts of  
the Association of Journalists of  
Yugoslavia, 20 pp.  
CROATIAN, np, Nasa Stampa, Vol XII,  
No 107, Apr 1962, pp 5, 6.

JPRS 14287

Gymnasium in Legislation on and Practice  
of People's Republics, by R. Jenuovic,  
9 pp.  
CROATIAN, per, Nova Administracija,  
No 2, 1962, pp 106-112.

JPRS 14221

Investments in Health for 1957-1960,  
by Petar Dujanovic, 14 pp.  
CROATIAN, per, Socijalna Politika,  
No 2, 1962, pp 131-144.

JPRS 14221

New System of Student Credits, by  
B. Dumić, D. Petrović, 6 pp.  
CROATIAN, per, Socijalna Politika,  
No 2, 1962, pp 152-157.

JPRS 14221

New Hungarian Doctors and Candidates,  
4 pp.  
HUNGARIAN, per, Magyar Tudomány,  
Vol VII, No 2, 1962, pp 112, 113.

JPRS 14281

New Hungarian Doctors and Candidates,  
Jan 1962, 5 pp.  
HUNGARIAN, per, Magyar Tudomány,  
Vol VII, No 4, 1962, pp 269-271.

JPRS 14213

**Eastern Europe**  
**Sociological (Contd)**

Opstima Statutes and Realization of  
Minority Rights, by Koca Joncic,  
6 pp.

SERBIAN, per, Narodni Odbor, No 4,  
1962, pp 151-154.

JPRS 14221

Further Development of Relations  
Between State and Religious Societies,  
by Zivko Obrenovic, 5 pp.  
SERBIAN, per, Narodni Odbor, No 4,  
1962, pp 192-196.

JPRS 14221

Implementation of Decree on Abortions,  
8 pp.  
SERBIAN, per, Socialna i Zdravstvena  
Politika, No 3/4, 1962, pp 36-43.

JPRS 14288

**Biographic**

Report on Yugoslav Pharmaceutical  
Personalities, 10 pp.  
CROATIAN, per, Farmaceutski Glasnik,  
Vol XVIII, No 2/3, 1962, pp 95-97.

JPRS 14214

Biographic Data on Prof Dr Zdenek  
Frankenberger, Czechoslovak Biologist  
and Embryologist, by Ivan Stanek, 6 pp.  
CZECH, per, Biologia, Vol XVII, No 1,  
1962, pp 71-73.

JPRS 14233

WESTERN EUROPE

Economic

The Electric Power Supply of the  
Netherlands in 1960, by H. Giesberg,  
11 pp.  
DUTCH, per, De Ingenieur, Vol LXXIII,  
No 43, 1961, pp 591-596, CALL NO.  
**TA4 I59.**

Army Map Service

City of Helsinki Waterworks, 5 pp.  
FINNISH, per, Helsingin Kaupungin  
Vesilaitos, No 2, 1960, 9 pp,  
CALL NO. EIF 377 343.

Army Map Service

Helsinki Municipal Waterworks Operation  
Report, by E. Kajaste, 55 pp.  
FINNISH, per, Helsingin Kaupungin  
Vesilaitoksen Toimintakertomus, No 3,  
1960, 39 pp, CALL NO. EIF 377 343.

Army Map Service

Setting Up a Unit for the Production  
of a Particular Casting Job in a  
Foundry, by M. Dudouet.  
FRENCH, per, Fonderie, Vol CLXXXIV,  
May 1961, pp 171-177.

\*BISI 2837

European Transportation, by Gerard  
Pierrrot.  
FRENCH, per, Revue Militaire d'Information,  
No 306, 1959, pp 7-29, Encl No 1 to  
R-589-59, Office Army Attachee, Amer-  
ican Embassy, Paris, France.

\*ACSI I-1666  
ID 2121376

Radioactive Isotopes and the Construction  
Industry: International Colloquim:  
26-30 Sep 1960.  
GERMAN, blk, Wissenschaftliche Zeitschrift  
der Hochschule fuer Bauwesen, Leipzig,  
152 pp.

\*AEC

Personnel and Social Work in a  
Metallurgical Plant, by A. Heese.  
GERMAN, per, Stahl und Eisen, Vol LXXXI,  
3 Aug 1961, pp 1063-1069.

BISI 2637

Western Europe  
Economic (Contd)

Classification by Professions of the  
Engineers Employed by Iron and Steel  
Works, by H. Spitzer.

GERMAN, per, Stahl und Eisen, Vol LXXXII,  
29 Mar 1962, pp 420-426.

\*BISI 2852

The French Corporation for Development  
and Production of Ballistic Rockets,  
by J. Pergent.

GERMAN, per, Wehrkunde, No 5, 1962,  
pp 261-264.

\*ACSI I-1674  
ID 2203209

Swedish Harbor Assistant, 35 pp.  
SÆDISH, rpt, Svenska Hamnforbundet,  
1961, pp 47-58, Encl No 6 to R-197-61,  
Stockholm.

ACSI I-1483  
ID 2198550

Western Europe  
Political

Selected Articles From the Danish  
Newspaper Land og Folk.

- No 236, 1 Jun 1962, pp 7, 8.  
Jespersen Delivers Central Committee Report to 21st Congress of Danish Communist Party, by Kund Jespersen, 17 pp. JPRS 14317
- Vol XXI, No 237, 2 Jun 1962, pp 2-3.  
Ponomarev Addresses 21st Congress of Danish Communist Party, by Boris Ponomarev, 7 pp. JPRS 14317
- Vol XXI, No 242, 7 Jun 1962, p 2.  
Swedish Communist Party Chairman Hagberg Addresses 21st Congress of Danish Communist Party, by Hilding Hagberg, 5 pp. JPRS 14317
- Vol XXI, No 251, 17 Jun 1962,  
pp 9, 12.  
Danish Communist Party 21st Congress Adopts Political Manifesto, 9 pp. JPRS 14438
- Communist Theory is Linked to Practice,  
by Theo Marin, 4 pp.  
FRENCH, per, Le Debat Communiste,  
No 4, 15 Jun 1962, p 6. JPRS 14445
- Italian Party Life, by Pierre Folgalvez, 10 pp.  
FRENCH, per, Le Debat Communiste,  
No 4, 15 Jun 1962, pp 7-10. JPRS 14445
- The Sectarian Dancer: Principal Obstacle to Our Action, by Jean Blume, 33 pp.  
FRENCH, per, Le Drapeau Rouge, Vol XL,  
No 113, 12 Jun 1962, pp 1, 4; No 114,  
13 Jun 1962, p 4; No 115, 14 Jun 1962,  
p 4; No 116, 15 Jun 1962, p 4. JPRS 14428

Western Europe  
Political (Contd)

A Soviet Evasion and the Law of Unequal Development in the Socialist Camp, by C. M. 6 pp.

FRENCH, np, Est & Quest, No 279, 16/31 May 1962, pp 14-16.

JPRS 14384

Neutralists Within the Communist Movement, by B. Lazitch, 5 pp.

FRENCH, np, Est & Quest, No 279, 16/31 May 1962, pp 26-28.

JPRS 14384

Communists are Active in Portugal's Clandestine "Patriotic Junta", 5 pp.

FRENCH, np, Est & Quest, No 280, 1/15 Jun 1962, pp 5-7.

JPRS 14406

Rochet Urges French Communists to Step Up Ideological and Political Work, by Waldeck Rochet, 9 pp.

FRENCH, np, France Nouvelle, No 871, 27 Jun/3 Jul 1962, pp 11-14.

JPRS 14406

Thorez Addresses French Communist Party Central Committee, by Maurice Thorez, 16 pp.

FRENCH, np, l'Humanite, 5 Jun 1962, p 6.

JPRS 14285

Courtieu Reports to the French Communist Party Central Committee on Educational Work, by Paul Courtieu, 11 pp.

FRENCH, np, l'Humanite, 8 Jun 1962, p 6.

JPRS 14267

Maurice Thorez is Worried, by R. Merlin, 5 pp.

FRENCH, np, l'Internationale, No 127, No 1, Jun 1962, p 7.

JPRS 14445

French Communist Party's New Slogan: Establish a True Democracy, by Pierre Belleville, 4 pp.

FRENCH, np, Tribune Socialiste, No 106, 16 Jun 1962, p 5.

JPRS 14384

Western Europe  
Political (Contd)

Selected Articles From the French  
Periodical Unir Pour le Socialisme.

No 114, May 1962.  
Let's Be Revisionist', 5 pp,  
(p 1).

JPRS 14317

Unir Strikes Back at French Com-  
munist Party Leadership, 10 pp,  
(pp 6-7).

Prenant Sets Forth Aim of Association  
of Former French Communist Party  
Members, by Marcel Prenant, 9 pp,  
(pp 8-9).

Here and There in the International  
Communist Movement, 6, pp, (p 12).

No 115, Jun 1962.  
Unir Calls for New French Communist  
Party Statutes, 6 pp, (p 3).

JPRS 14374

Among the Brother Parties, 4 pp,  
(p 5).

Peaceful Coexistence as Viewed by a  
French Former Communist, by Victor Leduc,  
4 pp.  
FRENCH, per, La Verite des Travailleurs,  
No 126, May 1962, p 14.

JPRS 14222

Transition to Socialism by Peaceful  
or Violent Means?, by J. Vincent,  
4 pp.  
FRENCH, per, Voix Ouvriere, Vol XVIII,  
No 24, 16 Jun 1962, p 1.

JPRS 14428

Operating Rule Book - 1953, 104 pp.  
GREEK, bk Genikos Kanonismos Kiniseos -  
1953, 173 pp, Encl No 6 to R-466-55.

ACSI I-1057  
ID 1298071

Western Europe  
Political (Contd)

Italian Left-Wing Socialists Question  
Socialist Support of Center-Left  
Coalities, by Tullio Veccheitti,  
4 pp.  
ITALIAN, per, Mondo Nuovo, No 11,  
3 Jun 1962, p 3.

JPRS 14285

Italian Left-Wing Socialists Look  
Askance at Nenni's Schemes, 4 pp.  
ITALIAN, per, Mondo Nuovo, No 11,  
3 Jun 1962, p 8.

JPRS 14285

Italian Left-Wing Socialist on  
Prospects for the Center-Left and  
Cooperation With the Communists, by  
Domenico Settembrini, 22 pp.  
ITALIAN, per, Mondo Operaio, Vol XV,  
No 4, 1962, pp 13-19.

JPRS 14222

Underground Communist Activities in  
Spain, 3 pp.  
ITALIAN, per, Rinascita, No 4,  
26 May 1962, pp 9, 10.

JPRS 14222

How a New Italian Generation Approaches  
Socialism, by Achille Cochetto, 13 pp.  
ITALIAN, per, Rinascita, No 7,  
16 Jun 1962, pp 20-21.

JPRS 14438

Norwegian Radical Marxist Socialist  
on Left-Wing Action, by Kjell  
Christensen, 3 pp.  
NORWEGIAN, np, Oreintering, Vol X,  
No 19, 26 May 1962, p 7.

JPRS 14222

Norwegian Socialist People's Party  
Secretary Denies Moscow Financial  
Support, by Knut Lofsnes, 4 pp.  
NORWEGIAN, np, Oreintering, Vol X,  
No 21, 9 Jun 1962, pp 1-2.

JPRS 14438

Western Europe  
Political (Contd)

Moscow's Excommunication Bill Against  
Danish Socialist People's Party Leader  
Aksel Larsen, by Finn Gustavsen,  
6 pp.  
NORWEGIAN, np, Orientering, Vol X,  
No 22, 16 Jun 1962, pp 1, 6.

JPRS 14438

Swedish Communist Party Chairman  
Hagberg Writes About Swedish Leftist  
Parties in Soviet Review Kommunist,  
by Hilding Hagberg, 3 pp.  
SWEDISH, np, Ny Dag, No 131, 8 Jun  
1962, p 2.

JPRS 14317

Western Europe  
Military

American Military Assistance to  
Danish Defense, 6 pp.  
DANISH, np, Berlingske Tidende,  
29 Apr 1962, OUSARMA, Denmark, Encl  
to R-123-62.

ID 2200708

Our Mountain Troops.  
GERMAN, per, Der Fourier, No 5, 1962,  
pp 170-174.

\*ACSI I-1672  
ID 2203207

Our Frontier Guard Problem - 716  
Kilometers Long, Against Finland,  
3 pp.  
NORWEGIAN, np, Aftenposten, 19 May  
1962; Encl to 75-62 to USNA, Oslo,  
19 May 1962.

Dept of Navy  
ONI 5148222

Notes on Logistics.  
PORTUGUESE, rpt, Instituto de Altos  
Estudos Militares Curso de Estado-Maior,  
1959, 123 pp, Encl No 5 to R-76-59,  
Army Attache, Lisbon.

\*ACSI I-1666  
ID 2112594

Quartermaster Corp in the Field.  
PORTUGUESE, bk, Intendencia em Campanha,  
1957, 100 pp, Encl No 6 to R-76-49,  
Army Attache, Lisbon.

\*ACSI I-1663  
ID 2203204

AFRICA

Economic

A Soviet Primer on Africa, by  
I. I. Potekhin, 321 pp.  
RUSSIAN, bk, Afrika 1956-1961, 1961,  
354 pp.

JPRS 14232

Political

Nigeria in the Struggle for Independence,  
by L. N. Pribytkovskiy, 218 pp.  
RUSSIAN, bk, Nigeriya v Sor'be za  
Nezavisimost', 1961, pp 3-191.

JPRS 14363

Algerian Communist Party Presents  
Its Program, 34 pp.  
FRENCH, per, Cahiers du Communisme,  
No 6, 1962, pp 83-107.

JPRS 14438

The Militant Organ of the South  
African Communists, by Ye. Udal'tsov,  
K. Trofimov, 4 pp.  
RUSSIAN, per, Kommunist, No 8,  
31 May 1962, pp 116-117.

JPRS 14237

Military

African-Malagasy Defense Pact, 4 pp.  
FRENCH, Official Journal of Malagasy  
Republic, 16 Dec 1961.

AF 1500311

African National Armed Forces, by  
Georges Chaffard.  
FRENCH, per, Tropiques Revue des  
Troupes des Marine, Mar 1962,  
pp 34, 36-42.

\*ACSI I-1645-B  
ID 2203203

Africa  
Sociological

Information for the President's Commission on the Status of Women, 5 pp.  
FRENCH, Encl to Desp 176, AnEmbassy,  
Fort Lamy, 8 Jun 1962; -7213,  
13 Mar 1962, CERN P-17.

Dept of State

Data on Village Life in Central  
Ubangi, 19 pp.  
FRENCH, monograph, Formation et  
Caracteres des Centres Secondaire  
Dans le Centre Oubangui, Dec 1960,  
pp 25-38, 57-62.

JPRS 14346

Evolution and Problems of the Urban  
Family in Africa South of the Sahara,  
43 pp.  
FRENCH, per, Problemes Sociaux  
Congolais, No 55, Dec 1961, pp 129-168.

JPRS 14346

Biographic

A Fifteen Minute Interview With  
Mr. Jean Banny, by Georges Chaffard.  
FRENCH, per, Tropiques Revue des  
Troupes des Marine, Mar 1962, pp 4-8.

\*ACSI I-1645-A  
ID 2203203

FAR EAST

Economic

Translations From Communist China Digest,  
No 65.  
CHINESE.

JPRS 14482

Translations From Communist China Digest,  
No 66.  
CHINESE.

JPRS 15533

Selected Articles From the Chinese  
Periodical Ching-chi Yen-chiu.

No 2, 1962.

JPRS 14387

Problems in a Comprehensive Exposition of  
the Economic Benefits of the Layout of Large-  
Scale Water Conservation Complexes, by Feng  
Hua-te, Huang Tsai-yao, 20 pp, (pp 1-10).

The Views of the Physiocrats Cannot be Used  
to Explain the Principle That Agriculture is  
the Foundation of the National Economy, by  
Teng K'e-Sheng, 16 pp, (pp 25-34).

Some of the Economic Workers and Economic  
Theory Workers in Peiping Held a Discussion  
Forum to Study the Question of Economic  
Effectiveness Under a Socialist System, 6 pp,  
(pp 43-50).

A Brief Summary of Divergent Views Expressed  
During Discussions on the Question of Economic  
Effectiveness Under a Socialist System, by  
Yuan, 3 pp, (pp 51-54).

No 4, 1962.

JPRS 14371

On the Problem of What Constitutes Business  
Accounting in Socialist Enterprises, by  
Ho Chien-Chang, 20 pp, (pp 1-10).

Discussion of Rural Market Trade, by Ho Cheng,  
Wei Wen, 12 pp, (pp 11-15).

**Far East  
Economic (Contd)**

**Selected Articles From the Chinese  
Periodical Ching-chi Yen-chiu. (Contd)**

No 4, 1962.

A Preliminary Study on The Quantitative Relation-ship of Rate and Proportion in Socialist Reproduction, by Liu Kuo-kuang, 32 pp, (pp 16-31).

JPRS 14371

Discussion of Several Problems Related to Simple Reproduction and Expanded Reproduction, by Liu Shih-pai, 11 pp, (pp 32-40).

**Selected Articles From the Chinese Periodical Chung-kuo Ch'ing-kung-yeh.**

No 4, 1960.

Solving the Problem of Raw Material Supply, 7 pp, (pp 3-5).

JPRS 14332

Industry-Business Cooperation in Pig Skinning, 5 pp, (pp 18, 19).

Introducing Several Examples of "Develop New Sources and Prevent Waste" as Practiced by the Leather Industry, 5 pp, (p 20).

The Glass Industry Should Vigorously Promote Conservation and Substitution of Soda Ash and Coal, 3 pp, (p 21).

How to Grasp Raw Materials for Light Chemical Industry, 4 pp, (p 26).

Raw Material Consumption Norm, 7 pp, (pp 32-33).

No 5, 1960.

Stimulation of Mechanization and Semi-Mechanization in Light Industry, 5 pp, (pp 3-4).

JPRS 14332

**Far East  
Economic (Contd)**

**Selected Articles From the Chinese Periodical  
Chung-kuo Ch'ing-kung-yeh. (Contd)**

- No 5, 1960. (Contd) JPRS 14332  
Stimulation of Automatic Production at Tientsin Bicycle Works, by Liang Kuo-an, 5 pp, (pp 5-6).
- Raw Material Supply Problems in Tientsin; by Chang I-p'ing, (pp 22-24).
- Resources and Processing of Wild Rubber Plants, 6 pp, (pp 30-31).
- Article Six: Production Planning 9 pp, (pp 31-33).
- Producing Native Grass Pulp Sheets by Fermentation, 4 pp, (p 43).
- No 7, 1960. JPRS 14427  
Achieve Complete Gasification in Light Industry, 5 pp, (pp 3, 4).
- Experience of Shantung Province in Promoting Gasification, 17 pp, (p 5).
- Experience of Tsinan Paper Plant in Conversion to Gas, 3 pp, (pp 7-9).
- A Simple Gas Furnace, 3 pp, (pp 10, 11).
- Talks on Basic Knowledge of Enterprise Administration, 7 pp, (pp 27, 28).
- No 8, 1960. JPRS 14427  
New Outlook in Light Industry Design Work, 4 pp, (p 15).
- Report on Gasification by Teng Chieh, Vice Minister of Light Industry, 4 pp, (p 22).

Far East  
Economic (Contd)

Selected Articles From the Chinese Periodical  
Chung-kuo Ch'ing-kung-yeh. (Contd)

- No 8, 1960. JPRS 14427  
Talks on Basic Knowledge of Enterprise Administration, 7 pp, (pp 33, 34).
- No 9, 1960. JPRS 14427  
Shih-Hsien Paper Mill, A Red Banner of the Paper Industry, 7 pp, (pp 11, 12).
- Development, Strengthening, and Improvement of Commune Industries in Szechwan Province, 7 pp, (pp 24, 25).
- Serve Agricultural Production and Promote Agricultural Equipment Reforms, 8 pp, (p 26).
- Strengthen Economic Accounting to Promote a Continued Leap Forward in the Salt Industry Production 12 pp, (pp 28-30).
- Talks on Basic Knowledge of Enterprise Administration, 4 pp, (pp 33, 34).
- No 10, 1960. JPRS 14130  
Methods of Increasing Production of Salt From Sea Water, by Yang Yen-te, 14 pp, (p 3).
- Improve the Quality of Paper For Cultural Uses, 10 pp, (p 8).
- To Make Pig Skin More Beautiful, 9 pp, (p 23).
- How Did Hsiang-Fang Commune Build Its Industry, 8 pp, (p 20).
- Basic Principles of Business Management, 11 pp, (p 31).
- More Than 1500 New Paper Mills in Two Years, 5 pp, (p 8).

**Far East  
Economic (Contd)**

**Selected Articles From the Chinese Periodical  
Chung-kuo Ch'ing-kung-yeh. (Contd)**

- No 11, 1950. JPRS 14180  
An Industrial Combine of Steel Mill,  
Foundry, and Bicycle Factory, by  
Tsingtao Bicycle, 13 pp, (p 16).
- Some Methods of Enlarging the Sources of  
Raw Materials, 6 pp, (p 22).
- Basic Principles of Business Management,  
5 pp, (p 35).
- No 12, 1950. JPRS 14180  
Produce More Beer, 6 pp, (p 6).
- More Sodium Carbonate Better Paper, 6 pp,  
(p 13).
- Use Half as Much Chloride to Make White  
Paper, 4 pp, (p 15).
- How Did We Produce More Soda and  
Chloride?, 5 pp, (p 15).
- Some Good Raw Material Policies, 4 pp,  
(p 16).
- Process Zinc With Native Methods, 6 pp,  
(p 27).
- Basic Principles of Business Management?,  
10 pp, (p 34).
- Chronology of Domestic and Foreign Events  
(Communist China), 117 pp.  
CHINESE, per, Hsin-Hua Pan-Yueh-k'an,  
No 15-24, 12 Aug - 27 Dec 1950. JPRS 14170

**Far East  
Economic (Contd)**

- Concerning the Planned and Proportional Development of the National Economy in Socialism, by Hsu Ti-hsin, 7 pp.  
CHINESE, per, Hung Ch'i, 1 Jun 1962, p 32. JPRS 14431
- Translations From Jen-min Jih-pao, No. 67.  
CHINESE, np, Jen-min Jih-pao, 14-27 May 1962. JPRS 14327
- Translations From Kuang-ming Jih-pao, No. 32.  
CHINESE, np, Kuang-ming Jih-pao, 23 Apr-13 May 1962. JPRS 14168
- Translations From Kuang-ming Jih-pao, No 33.  
CHINESE, np, Kuang-ming Jih-pao, 14-27 May 1962. JPRS 14321
- Translations From Kung-jen Jih-pao, No, 28.  
CHINESE, np, Kung-jen Jih-pao, 15-22 May 1962. JPRS 14320
- Translations From Ta Kung Pao, No 46.  
CHINESE, np, Ta Kung Pao, 1-5 May 1962. JPRS 14247
- Translations From Ta Kung Pao, No 47.  
CHINESE, np, Ta Kung Pao, 7-13 May 1962. JPRS 14480
- Translations From Ta Kung Pao, No 48.  
CHINESE, np, Ta Kung Pao, 14-20 May 1962. JPRS 14516
- Great Progress on Chinese Railroads, by Teng Tai-yuan.  
GERMAN, per, Deutsche Eisenbahn Technik, 1 Jan 1959, pp 12-14. \*ACSI I-1676  
ID 2203210
- Economic Development in Burma, 639 pp.  
JAPANESE, bk, Biruma no Keizai Kaihatsu, No 14, Tokyo, 5 Sept 1961, 467 pp. JPRS 14501
- Communist China's Broadcasting Industry,  
27 pp.  
JAPANESE, np, Ajia Kenkyu, No 307, 20 Feb 1962, pp 2-6; No 308, 27 Feb 1962, pp 4-9; No 309, 6 May 1962, pp 6-12. JPRS 14256

**Far East  
Economic (Contd)**

Successful Adjustment of Industries in  
Communist China, by Fukushima Yutaka, 22 pp.  
JAPANESE, per, Ajia Keizai Jumpo, No 495,  
21 Feb 1962, pp 1-11.

JPRS 14350

Objections to the Policy Handbook of the  
Socialist Party, by Shoichi Kasuga, 26 pp.  
JAPANESE, np, Akhata, 15/20 Apr 1962.

JPRS 14534

Japanese Study on Peoples Livelihood in  
Communist China, by Mitsuoka, 47 pp.  
JAPANESE, per, Chugoku Kenkyu Geppo, No 166,  
Tokyo, 10 Feb 1962, pp 1-30.

JPRS 14441

Facts and Problems Concerning Okinawa, by  
Kon Hidemi, 4 pp.  
JAPANESE, np, Kumamoto Nichinichi Shimbun,  
5 Apr 1962, Rpt No 1270/62. 9665288

500th INTC Gp  
Doc No 106354 (1a)

Automobile Industry Getting Ready for Liberaliza-  
tion.  
JAPANESE, np, Nihon Kezai, 12 May 1962; Encl to  
Desp 977, AmEmbassy, Tokyo, 31 May 1962.

Dept of State

Survey of Principal Ports of Japan --  
Part 1, 5 pp.  
JAPANESE, per, Nikkan Kogyo Shimbun,  
27/30 Apr 1962, Rpt No 1311/62. 9665290

500th INTC Gp  
Doc No 106380 (7a)

Survey of Principal Ports of Japan -- Part 2,  
6 pp.  
JAPANESE, per, Nikkan Kogyo Shimbun, 1-5  
May 1962, Rpt No 1372/62. 9665333

500th INTC Gp  
Doc No 196398 (1a)

Amendments to Law Governing Bank of Korea,  
29 pp.  
KOREAN, np, Mankuk Ilbo, 11 May 1962, p 2.

JPRS 14416

**Far East  
Economic (Contd)**

Selected Articles From the Mongolian Periodical Ediyn Dzasag Erhiyn Asuudal, No 3, 1961.

JPRS 14289

Problems Pertaining to an Increase of Annual Products, by U. Ragchaa, 9 pp, (pp 11-16).

Problems Pertaining to the Electrification of Agriculture, by G. Lubsantseren, 10 pp, (pp 17-21).

Profitable Work in Production Sectors, by O. Nyamaa, 10 pp, (pp 22-28).

Defects in the Capital Turnover Plans of the Economic Sectors and Their Operation, by J. Purebdorj, 6 pp, (pp 29-31).

Prospects for Cash Computation of Wages in Some Agricultural Artels, by G. Damdindorj, 10 pp, (pp 70-82).

**Selected Articles From the Mongolian Newspaper Unen.**

JPRS 14190

7 Apr 1962, p 1.  
Collective Agreements, 5 pp.

23 Apr 1962, p 1.  
Banking Institutions Must Play a Bigger Role in the Fulfillment of the Economic Plans, by Yu. Tsedenbal, 6 pp.

25 Apr 1962, pp 2, 3.  
VII Congress of Mongolian Trade Unions, 20 pp.

K'un Lun and Tarim, by E. M. Murzayev, et al, 107 pp.  
RUSSIAN, bk, Kun'lum i Tarim, 1961, 212 pp.

JPRS 14217

**Far East  
Economic (Contd)**

Tientsin, by Pao Chiao-Ming, He Tz'u-ch'iang,  
127 pp.

RUSSIAN, bklt, Tientsin, Moscow, 1900,  
pp 1-92.

JPRS 14436

Natural Conditions of Sinkiang, by E. M.  
Murzayev, Chzhou Li-san', (DC-6948).

RUSSIAN, monograph, Prirodnyye Usloviya  
Sin'tsyana, 1900, pp 3-55, 132-172, 195.

\*JPRS

Development of Savings Banks in North Vietnam,  
by Tran Linh Song, 7 pp.

RUSSIAN, per, Finansy SSSR, No 4, 1962, pp 77-81.

JPRS 14436

Dialectics of War and Peace, by Sakaki Toshio,  
16 pp.

JAPANESE, per, Bunka Hyoron, Apr 1962,  
pp 10-20.

JPRS 14239

Discussing the People's Exploitation of Virgin  
Land, by Tran Huu Duc, 8 pp.

VIETNAMESE, per, Hoc Tap, Feb 1962, pp 26-29,  
54.

JPRS 13874

Rational Distribution and Consumption, by  
Le Trung Toan, 6 pp.

VIETNAMESE, np, Nhan Dan, 13 May 1962, p 3.

JPRS 14392

Is it Possible to do Good Work at Irrigation  
Projects?, by Tran Quy Kien, 3 pp.

VIETNAMESE, np, Nhan Dan, 18 May 1962, p 3.

JPRS 14392

The Chemical Industry, by Tran Tu Phong,  
Nguyen Van Su, 7 pp.

VIETNAMESE, np, Tien Phong, 13 May 1962,  
p 3.

JPRS 14533

Research on the Tropicalization of Technology  
Within the Five-Year Plan, by Nguyen Nhu Kim,  
5 pp.

VIETNAMESE, per, Tin Tuc Hoat Dong Khoa Hoc,  
No 4, 1962, pp 5-9.

JPRS 14452

Far East  
Economic (Contd)

One Year of Activities in Science and  
Technology, by Bui Cong Trung, 10 pp.  
VIETNAMESE, per, Tin Tuc Hoat Dong  
Khoa Hoc, May 1962, pp 1-3.

JPRS 14538

Building up the Laboratory of Physics, by  
Dam Trung Don, 22 pp.  
VIETNAMESE, per, Tin Tuc Hoat Dong Khoa Hoc,  
May 1962, pp 4-9.

JPRS 14538

Political

Compendium of Laws and Regulations of the  
People's Republic of China, 90 pp.  
CHINESE, bk, Chung-hua Jen-min Kuang-ho-kuo  
Fa-kuei Hui-pien, Vol VIII, 1958, 1959,  
pp 1-320.

JPRS 14335

Compendium of Laws and Regulations of the  
People's Republic of China, 381 pp.  
CHINESE, monograph, Chung-hua Jen-min  
Kung-ho-kuo Fa-kuei Hui-pien, Vol IX, Aug  
1959, pp 1-312.

JPRS 14346

Selected Articles From the Chinese  
Periodical Hung-ch'i, 1 Jun 1962.

JPRS 14431

Experiment and Application, by Li Shou-chang,  
4 pp, (p 17).

The Truth About the New Frontier" and  
"Global Strategy , by Ch'en Yuan, 6 pp,  
(p 20).

The Slogan of "Peaceful Revolution" and  
the Reality of Colonialism, by Chung Kuo-hao,  
6 pp, (p 24).

Kennedy Follows the Same Old Rut in South  
Vietnam, by Ch'en Yu-wei, 4 pp, (p 29).

Far East  
Political (Contd)

Selected Articles From the Japanese  
Newspaper Akahata.

1, 8-11, 14, 21 Apr 1962.  
Questions to the Communist Party, 14 pp.

10/11 Apr 1962, Rpt 1286/62. 9605282  
Significance and Teachings of the Itazuke  
Rally, by Tashiro Fumihsia, 8 pp.

JPRS 14292  
500th INTC Gp  
Doc No 106364 (1a)

2 Jun 1962.  
Japan Communist Party Designates Documents  
For Self-Study, 11 pp.

JPRS 14471

3 Jun 1962, pp 4, 5.  
Japanese Communist Party Platform for the  
Coming House of Councillors Elections,  
31 pp.

JPRS 14471

True Character of Imperialism and the Re-  
action Group, and the Fundamental Method  
of Overcoming It. On Studying Fourth Volume  
of Collected Works of Mac Tse-tung, by  
Anzai Kuraji, 15 pp.

Selected Articles From the Korean Periodical  
Kulloja, No 3, 1962.

JPRS 14480

To Raise the Capabilities of the Party  
Committees, 3 pp, (pp 8-14).

The Significance of Centralized Leadership  
in Expanding the Strength of the Regional  
Party Organization, by Yun Hyongsik, 7 pp,  
(pp 41-45).

The Formation of an Anti-American United  
Front for National Salvation in South Korea  
is an Urgent Demand in the Growth of the  
Revolution, by Son Yongsun, 8 pp, (pp 40-51).

Far East  
Political (Contd)

Leninism Is a Great Teaching for Sweeping Worldwide Changes, by Ts. Dagersuren, (Speech), 23 pp.  
MONGOLIAN, np, Unen, 23 Apr 1962, pp 2, 3.

JPRS 14196

"Reinforce National Unity and Communist Unity!" (The Political Report of the Chairman of the PKI Central Committee to the Third Plenum of the Central Committee at the End of 1961, by D. N. Aidit, 17 pp.  
VIETNAMESE, pamphlet, 1961, pp 3-31.)

JPRS 14471

Military

Japan's Defense Industry and the Second Defense Program, 6 pp.  
JAPANESE, per, Kildan Koryo Shimbun, 25/26 Apr 1962, Rpt No 1283/62. 9365189

500th INTC Gp  
Doc No 106363 (3a)

Far East  
Geographic

Geomorphological Type Demarcations of Lan-chou Region, by Wang Te-chi, 38 pp.  
CHINESE, bk, Chung-kuo Ti-ssu-chi Yen-chiu, Vol I, No 2, 1958, pp 45-50.

JPRS 14539

The Present Status of Harst Research in China, by Ku Teh-chen, 38 pp.  
CHINESE, per, K'o-hsueh T'ukg-pao, No 11, 25 Nov 1961, pp 1-11.

JPRS 14223

Geological Characteristics of the "Lu-hsi" (Western Shantung) Coal Fields, by Chung Shih-Hsing, 48 pp.  
CHINESE, per, Ti-chih Hsueh-pao, Vol XL, No 1, Feb 1960, pp 70-87.

JPRS 14291

The Ho-lan-shan Coal-Bearing District, by Ting F'ei-min, 49 pp.  
CHINESE, per, Ti-chih Hsueh-pao, Vol XL, No 1, Feb 1960, pp 89-109.

JPRS 14291

Structural Characteristics of the Upper Permian To-ling Coal-Bearing Series in Human Province, by Wang Chai-hsia, 25 pp.  
CHINESE, per, Ti-chih Hsueh-pao, Vol XL, No 1, Feb 1960, pp 110-119.

JPRS 14291

Effective Development of the Science of Geography, by Sh. Tsegrmid, 5 pp.  
MONGOLIAN, np, Unen, 18 Apr 1962, pp 2-3.

JPRS 14190

**Far East  
Sociological**

The Problem of Subjective Activity in the History of Western Philosophy, by Ju Hsin,  
13 pp.

CHINESE, per, Hung-ch'i, 1 Jun 1962, p 6.

JPRS 14431

We Have Eaten the Forest, by Georges Condominas, (NY-7155).

FRENCH, mono, Nous Avons Mange La Foret, Paris, 1957, pp 7-38.

\*JPRS

The Great Vitality of our Party's Public Health Policy, by Lee Chong-yool, 6 pp.

KOREAN, per, Kulloja, No 3, 1962, pp 29-34.

JPRS 14436

Customs and Habits of the Bahna Tribes in Binh, by Moc Hunog, 69 pp.  
VIETNAMESE, 1960.

ACSI I-1330  
ID 2198515

Labor: Transmittal of GVN Department of Labor Brochure.

VIETNAMESE, Encl to Desp 500, AmEmbassy, Saigon, 31 May 1962.

Dept of State

Main Tasks in the Hygiene Program for the Prevention of Epidemics in 1962, 5 pp.

VIETNAMESE, per, Hoc Thuc Hanh, No 3, 1962, pp 1-2, 3.

JPRS 14452

Medical Research in 1962, by Pham Ngoc Thach, 6 pp.

VIETNAMESE, np, Nhan Dan, 10 May 1962, p 3.

JPRS 14392

MIDDLE EAST

Political

Israeli Communist Youth League Sums up  
Accomplishments, 4 pp.  
HEBREW, np, Kol Haam, 29 May 1962, pp 1, 2.

JPRS 14285

Resolutions of the Sixth Session of the  
Central Committee Plenum of the Israeli  
Communist Party, 9 pp.  
HEBREW, np, Kol Haam, 31 May 1962, pp 1, 2.

JPRS 14285

Workers' Campaigns in Israel and Abroad  
Stimulate Class Struggle, by Esther Wilenska,  
6 pp.  
HEBREW, np, Kol Haam, 12 Jun 1962, p 2.

JPRS 14428

LATIN AMERICA

Economic

The San Lorenzo Railroad, by Yves Gandon,  
5 pp.  
FRENCH, per, La Vie du Rail, No 28, 1961,  
4 pp.

ACSI I-1431  
ID 2295549

Guatemalan Labor Code,  
SPANISH, bk, Encl to Desp 671, AmEmbassy,  
Guatemala, 20 June 1962.

Dept of State

On the Argentine Economy, 54 pp.  
SPANISH, rpt, National Accounts in the  
Argentine Republic, pp 38-59.

JPRS 14404

Insufficient Development and Economic Pauperiza-  
tion, by Felipe Pazos, 15 pp.  
SPANISH, per, Suplemento de "Cuadernos", No 47,  
Mar/Apr 1961, pp 40-55.

JPRS 14513

Latin America  
Political

Working Class, Party, and State in the Cuban Revolution, by Roger Garaudy, 29 pp.  
FRENCH, per, Cahiers du Communisme, No 6, 1962, pp 65-82.

JPRS 14438

Spanish Communist Party Secretary General Gives Interview, by Santiago Carrillio, 3 pp.  
NORWEGIAN, np, Friheten, Vol XXII, No 130, 9 Jun 1962, p 8.

JPRS 14438

The Voice of Revolutionary Cuba, by A. Kalinin, M. Mokhnachev, 5 pp.  
RUSSIAN, per, Kommunist, No 8, 31 May 1962, pp 113-115.

JPRS 14237

Reorganization of the Political Parties, 3 pp.  
SPANISH, Encl 1 to Desp 1455, AmEmbassy, Buenos Aires, 21 May 1962; Embassy Telegram 2371; Embassy Despatches 473, 23 October 1956, 500, 29 October 1956.

Dept of State

Leftist Brazil Priest Gives His Political Views, 15 pp.  
SPANISH, np, Bohemia, No 125, 13 Apr 1962, pp 27, 29, 73.

JPRS 14356

Mexican Immigration and Emigration Regulations, 48 pp.  
SPANISH, per, Diario Oficial, Vol CCLII, No 2, 3 May 1962, pp 1-18.

JPRS 14529

Gonzales Addresses Chilean Communist Party Central Committee, by Jose Gonzales, 53 pp.  
SPANISH, np, El Siglo, No 3422, 1 Jun 1962, pp 8-10.

JPRS 14374

**Latin America**  
**Military**

Amendment to Law Governing Officer Careers in  
Military Forces, 23 pp.  
SPANISH, rpt, 9 Mar 1960, OARMA, Colombia,  
Encl to R-158-62.

ID 2201054

**Sociological**

Decree No 7 of the Ministry of Public Health  
of Cuba, 24 pp.  
SPANISH, np, Gaceta Oficial, Vol LX, No 58,  
23 Mar 1962, pp 3587-3594.

JPRS 14355

WORLD WIDE

Biographic

List of Participants at the Second International  
Conference on Analysis of Stresses.  
FRENCH, paper, Deuxieme Conference Internationale  
D'Analyse des, Attach1 to IR-1504378.

\*FTD-TT-62-996

SCIENTIFIC

Aeronautics

Air Express, AN-24, by A. Vodyanoy.  
RUSSIAN, per, Grazhdanskaya Aviatsiya,  
No 3, 1962, pp 18-20.

\*FTD-TT-62-1056

Range During the Gliding of a Winged  
Flying Machine With Cosmic Velocities,  
by F. G. Yasinskiy, 10 pp.  
RUSSIAN, per, Iz Vysskikh Ucheb Zaved,  
Aviats Tekh, No 3, 1961, pp 31-37.  
9677360

FTD-TT-62-3

Propeller-Wing, by N. Kamov, 5 pp.  
RUSSIAN, per, Kryl'ya Rodiny, No 10,  
1961, p 26. 9677376

FTD-TT-62-571

Self-Induced Oscillations of a  
Neutral Airplane With an Autopilot  
Having an Impulse-Type Servo, by  
S. M. Alferov.  
RUSSIAN, per, Trudy Moskva Aviatsionny  
Inst. Voprosy Avtomaticheskogo  
Regulirovaniya Dvizhushchikhshya  
Ob'yektor, No 139, 1961, pp 71-86.

\*FTD-TT-62-1073

Dynamic Accuracy in Automatic Long-  
itudinal Stability Control on  
Winged Aircraft in Disturbed Air.  
RUSSIAN, per, Trudy Moskva Aviatsionny  
Inst. Voprosy Avtomaticheskogo  
Regulirovaniya Dvizhushchikhshya  
Ob'yektor, No 139, 1961, pp 87-107.

\*FTD-TT-62-1073

Aerodynamic Investigations of Vtol  
Rotors Under Hovering Conditions,  
by F. P. Kurochkin.  
RUSSIAN, per, Trudy Mosk Ordena  
Lenin Aviat Inst imeni Sergo  
Ordzhonikidze, Voprosy Aerodinamiki  
Nesushchikh Vintov Vertoletov, No 142,  
1961, pp 5-24.

\*FTD-TT-62-815

Scientific  
Aeronautics (Contd)

- Vertical Descent Conditions of Helicopters, by V. I. Shaydakov.  
RUSSIAN, per, Trudy Mosk Ordena Lenin Aviat Inst imeni Sergo Ordzhonididze, Voprosy Aerodinamiki Nesushchikh Vintov Vertoletov, No 142, 1961, pp 81-141. \*FTD-TT-62-815
- A Controlled Gliding Parachute, by A. M. Foteyev, I. L. Glushkov, 5 pp.  
RUSSIAN, Patent No 35,344 (642533/27), 29 Jan 1960. 9677419 FTD-TT-62-349
- Factors Influencing the Recoil of a Supersonic Discharge, by Pierre Carriere, Michel Sirieix.  
FRENCH, rpt, Office National D'Etudes et de Recherches Aero-nautiques, Memo Technique No 20, 1961, 74 pp. \*FTD-TT-62-1077
- Technical Data and Flying Capabilities of the Yak - 18 U.  
GERMAN, per, Aero Sport, No 5, 1962, pp 27-28. \*FTD-TT-62-987
- Heinkel HE-211, An Example of a Successful Project Development.  
GERMAN, per, Luftfahrttechnik, Vol VIII, No 4, 1962, pp 112-116. \*FTD-TT-62-1055
- HFB-320 Passenger Airplane.  
GERMAN, per, Luftfahrttechnik, Vol VIII, No 4, 1962, pp 116, 117. \*FTD-TT-62-1055
- USSR Helicopter Sets Records, by N. G. Balakin.  
POLISH, per, Skrzydla Polska, Vol XVIII, No 4, 1962, p 5. \*FTD-TT-62-1069
- Experimental Aircraft Bristol T188 - Anglia.  
POLISH, per, Skrzydla Polska, Vol XXVIII/XXII, No 4, 1962, p 9. \*FTD-TT-62-1081
- On the Danger of Flying Through a Radiation Forming Cloud, by M. Chabowski, 8 pp.  
POLISH, per, Wojskowy Przeglad Lotniczy, No 8, 1960, pp 27-31. 9677375 FTD-TT-62-42

Scientific  
Astronomy

Investigations of the Physical  
Conditions of the Moon and Planets,  
by N. P. Barabashev, 30 pp.  
RUSSIAN, bk, Issledovaniya Fizicheskikh  
Usloviy na Lunye i Planetakh, 1952.

9088795

RAND RM-3194-JPL

Interpretation of Observations of  
the Scintillation of Stars and Remote  
Terrestrial Light Sources, by  
V. I. Tatarskiy, 23 pp.  
RUSSIAN, bk, Trudy Soveshchaniya po  
Issledovaniyu Mertsaniya Zvezd,  
18-20 Jun 1958, pp 7-25, 60-62.  
9677353

FTD-TT-61-355

Astronomical Work of the Kara Kum  
Expedition of 1929, by S. G. Natanson.  
RUSSIAN, per, Ak Nauk SSSR, Materialy  
Komissii Ekspeditsionnykh Issled,  
Ser Turkmen, Vol XXIX, 1930,  
pp 181-208.

ACIC

Conditions of Application of Stokes'  
Classic Formula, by I. D. Zhongolovich.  
RUSSIAN, per, Byull Inst Teoret Astron,  
Ak Nauk SSSR, Vol IV, No 6 (59), 1949,  
pp 270-282.

ACIC

Scientific  
Biology

The Use of Multigroup Methods in Calculating Biological Shielding, by D. L. Broder, A. P. Kondrashov, 20 pp.

RUSSIAN, per, Atom Energ, Vol XIII, No 2, 1962, pp 129-139. 9677438

FTD-TT-62-635

Content of Carnosine and Creatine in "Tonic" and "Non-Tonic" Muscles of a Toad (Frog), by N. A. Yudayev.

RUSSIAN, per, Biokhimiya SSSR, Vol XIV, 1949, pp 51-57.

Univ of Melbourne  
T.154

The Interaction Between Ethyleninine and Genic Proteins With Reference To Heredity Variations, by I. A. Rapoport.

RUSSIAN, per, Byul Mosk Obshch Ispytat Prirody Otdel Biol, Vol LXVII, No 1, Jan-Feb 1962, pp 96-114.

\*USDA

On the Possibility of the Development of an Animal Organism Under Conditions of Air Nitrogen Substituted by Helium, by V. V. Boriskin, P. V. Oblapenko.

RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXLIII, No 2, 1962, pp 475-478.

\*FTD-TT-62-1072

New Production Processes to be Developed on the Basis of the Latest Achievements in Biochemistry, by A. I. Oparin, 9 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Ser Biol, No 5, 1961, pp 664-668.

NLL Tr Bulletin  
Vol IV, No 4, 1962

The Use of the Continuous Culture Method for the Physiological Microcells and Other Organisms, by N. D. Jerusalimsky.

RUSSIAN, per, Iz Ak Nauk SSSR, Ser Biol, No 3, May-June 1962, pp 418-429.

\*FTD-TT-62-1099

Scientific  
Biology (Contd)

Motor Activity of Intact Animals  
Under the Conditions of Artificial  
Gravity, by E. M. Juganov,  
P. C. Isakov, et al.  
RUSSIAN, per, Iz Ak Nauk SSSR,  
Ser Biol, No 3, May-Jun 1962, pp 455-460.

\*FTD-TT-62-1099

Introduction of New Lumbering Techniques  
in the Bratsk Forestry Combine, by  
G. B. Gordov.  
RUSSIAN, per, Les Prom, 1960, pp 3-5.

\*ACSI I-1677-A  
ID 2203211

Experiences in the Mechanization of  
Forest Clearing Operations, by  
B. A. Vasil'ev, V. N. Fedorenko.  
RUSSIAN, per, Les Prom, 1960, pp 5-7.

\*ACSI I-1677-B  
ID 2203211

The Absorption of Mineral Elements From  
Massive Crystalline Rocks of  
Lithophilous Flora, by M. A. Bobritskaya.  
RUSSIAN, per, Pochvennog Inst imeni  
Dokucheyeva, Vol XXXIV, 1950, pp 5-27.

NLL RTS 2026

V. I. Lenin and Philosophical Problems  
of Biology, by I. I. Novinskiy, 16 pp.  
RUSSIAN, per, Priroda, No 4, 1960,  
pp 3-11.

JPRS 14447

The Effect of an Electromagnetic Field  
on the Central Nervous System, by  
Yu. A. Kholodov, 3 pp.  
RUSSIAN, per, Priroda, No 4, 1960,  
pp 104, 105.

JPRS 14447

"Severyanka" in the Schools of Herring  
and Cod, by M. Ryzhenko.  
RUSSIAN, per, Rybovodstvo i Rybolovstvo,  
Vol IV, 1961, pp 29-30.

NLL M. 4716

Capillary Rise of Water and Salt  
Solutions in Tests With Block of Soil,  
by A. Morozov, I. Vernikovskaya.  
RUSSIAN, per, Trudy Ak Nauk SSR,  
Pochvennogo Inst imeni Dokuchayeva,  
Vol XLIV, 1954, pp 211-233.

CSIRO 4723

Scientific  
Biology (Contd)

Theoretical Prerequisites for the  
Acclimatisation of Organisms, by  
A. F. Karpeuich.  
RUSSIAN, per, Trudy Urino, Vol XLIII,  
1960, pp 9-30.

U.K. Atomic Energy  
Authority Risley,  
TRG Inf Ser 128(W)

On Some Methods of Obtaining and  
Applying Antisera in Phytopathological  
and Entomological Research, by  
M. S. Dunin.  
RUSSIAN, per, Vest Sel'skokhoz Nauk,  
No 3, 1958, pp 43-55.

NLL RTS 2003

The Effect of Low Gamma-Ray Doses on  
the Preservation of Vitamins in Food-  
stuffs, by G. M. Egiazarov.  
RUSSIAN, per, Voprosy Pitaniya  
Vol XIX, No 4, 1960, pp 54-58.  
9093510

AEFE, Harwell Tr-882

Selected Articles From the Russian  
Newspaper Zashchita Rasteniy ot  
Vrediteley i Boleziney.

Vol VI, No 4, 1961, pp 46, 47.  
Organo-Phosphorus Insecticides,  
by P. V. Popov, 4 pp.

JPRS 14272

No 5, 1961.  
Measures Taken in Plant Pest  
Control, 5 pp, (pp 1-3).

JPRS 14491

Conference on Herbicides, by  
N. A. Shipinov, 6 pp, (pp 55-57).

JPRS 14272

Vol VI, No 7, 1961, pp 1, 2.  
Aviction in Crop Protection, 5 pp.

JPRS 14272

Chinese Methods in Hog Raising, by  
Ch'ang Tsung-hui, 162 pp.  
CHINESE, rpt, Chung-kuo Yang-chu Fa,  
1957, pp 17, 18, 24-69, 98, 99, 101-,  
133, 134, 152-155, 165-167, 191, 192,  
194-219, 234, 289-290, 292-319.

JPRS 14246

Scientific  
Biology (Contd)

High Yields From Control of Water and Fertilizer Use Based on the Physiological Properties of Winter Wheat, by Li Hsueh-chu, 9 pp.  
CHINESE, per, K'o-hsueh T'ung-pao, No 11, 26 Nov 1961, pp 46-48.

JPRS 14223

Poisonous Sea Snakes and Their (Hydrophiidae), 8 pp.  
FRENCH, mono, Dec 1960. 9665559

500th INTC Gp  
Rpt No 1229/62

Contribution to the Study of the Venom of Trimeresurus Gramineus of South Vietnam, by Duong Hong-mo, 6 pp.  
FRENCH, rpt, Mar 1961. 9665602

500th INTC Gp  
Rpt No 1630/62

Staphylococcal Mastitis in Sheep and Local Immunization, by J. Pillet, O. Gorard, H. Dutheil, 12 pp.  
FRENCH, per, Ann Inst Pasteur, Vol XCVI, 1959, pp 591-600.

AEC NP Tr-878

Soil Mechanics. Elasticity of Non-Saturated Clays. Tests on Test Samples, by Gerhard Scheuch, 3 pp.  
FRENCH, per, Comptes Rendus Academie des Sciences, Vol CCXLIX, No 12, 1959, pp 1031-1032.

CSIR Tr No 210

Power to Fix Phosphate Ions of Various Constituents of the Soil and the Study of the Reserve Phosphate, by M. Blanchet.  
FRENCH, per, Comptes Rendus Herbdomadaires des Seances de l'Academie d'Agriculture de France, Vol XLV, 1959, pp 247-252.

CSIRO 4778

Evolutional Cycle of Piroplasma Canis in Ixodines, by E. Brumpt.  
FRENCH, per, Comptes Rendus Herbadaires des Seances et Memoires de la Societe de Biologie et de ses Filiales et Associees, Vol CXXIV, No 10, 1937, pp 928-931.

CSIRO 4758

Scientific  
Biology (Contd)

The Use of the Paracusis Willis  
Measurement in Some Types of  
Hypacusis, by F. Ancona, W. Arvieri.  
FRENCH, per, Rivista di Audiologia  
Pratica, Vol VI, No 7-9, 1956,  
pp 27-39.

CAL

Cytological Diagnosis of the Chirono-  
mids, I. An Identification Table  
for the Genus Chironomus Based on  
Salivary Gland Chromosomes, by  
H. G. Keyl, Ilse.  
GERMAN, per, Archiv fur Hydrobiologie,  
Vol LVI, No 1/2, 1959, pp 43-57.

Univ of Melbourne  
T.158

Physiological Effect of Boron on the  
Radicles of Vicia Farba, by  
G. Scholz.  
GERMAN, per, "Flora" Allgemeine Botan-  
ische Zeitung, Vol CXLVIII, No 2,  
1959, pp 295-305.

Univ of Melbourne  
T.156

Artificial Inoculation of Forest  
Plants With Mycorrhiza II. The Peat  
Litter Culture of Mycorrhiza Fungi,  
by M. Moser.  
GERMAN, per, Forstwissenschaftliches  
Centralblatt, Vol LXXVIIh, No 9/10,  
1958, pp 273-278.

CSIRO

Influence of Steaming on the Swelling  
Pressure of Wood, by T. Perkitny.  
GERMAN, per, Holz als Roh- und  
Werkstoff, Vol XVII, No 2, 1959,  
pp 54-61.

CSIRO 4804

Variation and Frequency of Fibre  
Lengths in Spruce, by G.  
Schultze-Dewitz.  
GERMAN, per, Holz als Roh- und  
Werstoff, Vol XVII, No 8, 1959,  
pp 319-326.

CSIRO 4800

Scientific  
Biology (Contd)

Investigation of Methods for Determining Spiral Grain in Different Age Zones in Hardwood, by W. Knigge, H. Schulz.  
GERMAN, per, Holz als Roh- und Werkstoff, Vol XVII, No 9, 1959,  
pp 341-351.

CSIRO 4755

Chemical Studies of Tropical Woods IV.  
Chemical Investigation of Teak Wood,  
by W. Sandermann, Dietrichs.  
GERMAN, per, Holzforschung, Vol XIII,  
No 5, 1959, pp 137-148.

CSIRO 4875

Investigation of the Surface Pasteurization, by Means of Soft X-Rays, of Packed Samples of Fish and Meat Containing Inner Bacteria, by A. Schmidt-Lorenz, A. Berger, 17 pp.  
GERMAN, per, International J Appl Radiation and Isotopes, Vol XI,  
1961, pp 161-173.

AEC Tr-5096

Microphotographic Investigations of Swelling in Spruce and Beech Wood on Microtome Sections in Transmitted Light, and on Wood Billets in Incident Light, by M. Beiser.  
GERMAN, per, Kolloid-Z., Vol LXV, No 2, 1933, pp 203-211.

CSIRO 4828

Sorption Isotherms for Grain and Rape Seed, by H. J. Pichler.  
GERMAN, per, Landtechnische Forschung, Vol VI, No 2, 1956, pp 47-52.

CSIRO

Importance of Moisture for the Heat Inactivation of the Apyrase System of Musculature, by W. Partmann, G. Nemitz.  
GERMAN, per, Z. fuer Lebensmittel-Untersuchung und -Forschung, Vol CX, No 2, 1959, pp 109-114.

CSIRO 4775

Scientific  
Biology (Contd)

Nitrogen Assimilation and Utilization  
by Higher Plants Under Different  
Nutritional Conditions, by N. Atansiu.  
GERMAN, per, Z. fuer Pflanzanernahrung,  
Dungung, Bodenkunde, Vol XLIX, 1955,  
pp 242-245.

CSIRO 4713

Studies on the Population of Adelges  
(Dreyfusia) Piceae (Batz) Hemipt  
Adelgidae), by H. Karaflat, J. Franz.  
GERMAN, per, Zoologische Jahrbucher,  
Vol LXXXIV, 1956, pp 467-504.

CSIRO

Method of Deducing the Heritability of  
"All or None" Traits, by T. Abe.  
JAPANESE, per, Journal of Zoological  
Science, Vol XXXVIII, 1958, pp 362-366.

CSIRO 4703

Effect of the Thawing Method on the  
Separation of Liquid From Frozen Cod  
Fillet, by F. Aim.  
NORWEGIAN, per, Nordisk Kjolemote,  
No 131, 1957, pp 2-16.

CSIRO 4893

Study of Contamination and Absorption  
of Sr<sup>90</sup> and Cs<sup>132</sup> by Prochilodus  
Platensis (Shad), by L. J. Anghileri,  
Jose Leopoldo.  
SPANISH, per, Argentina Comision  
Nacional de Energia Atomica, 1959,  
20 pp; Informe, No 31, 14 pp.

\*AEC HW Tr-41

Scientific  
Chemistry

Neutron Irradiation of Arsenic Tri-chloride - Benzene Systems, by I. Tsifka, 12 pp.  
RUSSIAN, rpt, Chemical Effects of Nuclear Transformations, Vol I,  
24-27 Oct 1960, pp 185-193. 9089556

AEC Tr-5094

Selected Articles From the Russian Papers Corrosion of Reactor Materials, Conference, Salzburg, 4-9 Jun 1962.

\*AEC

The Nature of Oxygen in Liquid Sodium, by B. A. Nevzorov.

The Effect of Composition of Water on Corrosion of Zirconium Alloys at High Temperatures and Pressures, by I. L. Rozenfel'd, Yu. P. Ol'khovnikov, A. A. Sudarikova.

Resistance to Corrosion of Austenitic and Ferro-Perlitic Steels in a Stream of Liquid Sodium at Temperatures of 600 and 700°C, by V. S. Lyashenko, V. V. Zotov, V. A. Ivanov.

Mechanism of Carbon Transfer in Liquid Sodium, by V. S. Lyashenko, B. A. Nevzorov.

Some Aspects of the Theory of Corrosion of Reactor Materials in Critical Parameter Water, by V. V. Gerasimov, A. N. Gromova, S. G. Moskvichev.

Defoliant and Desiccants, by L. D. Stonov, (DC-6946). RUSSIAN, pamphlet, Defolianty i Desikanty, 1961, pp 5-100.

\*JPRS

Scientific  
Chemistry (Contd)

Investigation Into the Radiation Chemistry of Petroleum Hydrocarbons and the Application of Nuclear Irradiation in the Petroleum Refining Industry and Petrochemical Synthesis, by A. V. Topchiyev, K. P. Lavrovskiy, L. S. Polak. RUSSIAN, bk, International Petroleum Congress; 5th, New York 1959, Doklady, Vol III; Pererabotka Nefti i Gaza. Neftekhimiya, Moscow, 1961, pp 345-354.

\*FTD-TT-62-1047

Magnetic Elements, 338 pp.  
RUSSIAN, bk, Magnitnyye Elementy, 1960, 313 pp.

JPRS 14224

Research on the Corrosion of Zirconium Alloys in Water and Steam at High Temperatures, by A. A. Kiselev, V. A. Mnshkin, A. V. Kozhevnikova. RUSSIAN, paper, Proceedings of the IAEA Conference on Corrosion of Reactor Materials, Salzburg, May 1962.

\*AEC

On the Velocity of Combustion of Atomized Fuel, by V. Ya. Basevich. RUSSIAN, bk, Sgoraniye i Smeseobrazovaniye v Dizelyakh, Akademiya Nauk SSSR, 1960, pp 10-18.

\*FTD-TT-62-1028

Viscosity Properties of Mixtures of Oils of Different Chemical Nature and of Lubricating Greases Produced by Thickening Them, by D. S. Velisovskiy, P. I. Kazhdan, G. D. Bondarevskiy. RUSSIAN, bk, Trudy Tret'ye Vses. Konferentsii po Treniyu i Iznosu v Mashinakh. M., Ak Nauk SSSR, Vol III, 1960, pp 248-255.

\*FTD-TT-62-925

Scientific  
Chemistry (Contd)

Selected Articles From the Russian  
Periodical Dok Ak Nauk SSSR.

Vol CXXXVI, No 2, 1961, pp 398-400.  
Stability of Hydrated Calcium  
Sulphoaluminates, by Yu. M. Butt,  
et al.

NLL M. 4773

Vol CXXXVIII, No 3, 1961, pp 619, 620.  
9677420  
The Polymerization of Nitroethylene  
by  $\delta$ -Rays, by V. N. Sokolov,  
I. Ya. Poddubnyy, V. V. Perekalin,  
5 pp.

FTD-TT-62-296

Vol CXXXIX, No 2, 1961, pp 424-426.  
Nuclear Reaction (a, n) for the  
Determination of Certain Elements in  
Solution, by I. N. Plaskin, et al.

U.K. Atomic Energy  
Authority  
Risley, TRG Inf Ser  
129 (W)

Vol CXLII, No 1, 1962, pp 88-91.  
Production, Pyrolysis and Pholysis  
of Polyfluorinated Azo Compounds  
of the Aliphatic Series, by  
V. A. Ginsburg, A. Ya. Yakubovich,  
A. S. Filatov, 8 pp.

Navy Tr 3184/APL  
T-299

Vol CXLII, No 2, 1962, pp 354-357.  
Heterolytic Transformations of Poly  
Fluorinated Azoalkanes, by V. A.  
Ginsberg, A. Ya. Yakubovich.

\*FTD-TT-62-1070

Conditions Under Which Ferric Oxides  
Penetrate Into Boilers and Methods for  
Prevention of Scale Formation, by  
L. A. Meier, N. N. Man'kina.  
RUSSIAN, per, Elektricheskiye Stantsii,  
Vol XXXI, No 9, 1960, pp 6-10.

\*Navy/NRL

Change in the Chemical Indices of  
Alimentary Fats under the Action of  
Ionizing Radiation, by A. A. Fomin,  
8 pp.

RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 34-49.

JPRS 14345

Scientific  
Chemistry (Contd)

The Sedimentation of Aerosol Particles  
on Cylinders, by V. F. Ignat'yev.  
RUSSIAN, per, Inzhenero-Fiz Zhur,  
Vol III, No 12, 1960, pp 17-23.

NLL M. 4629

Rules Observed to Govern the Inflammation of Mixtures of Combustible  
Liquids, by V. I. Blinov.  
RUSSIAN, per, Inzhenero-Fiz Zhur,  
Vol IV, No 2, 1961, pp 95-98.

\*FTD-TT-62-1037

The Surface Tension of Metallic Cesium,  
by O. A. Timofeyevicheva, V. B.  
Lazarev, 5 pp.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel  
Khim Nauk, No 2, 1962, pp 358-359.  
9677436

FTD-TT-62-627

The Effects of Oxygen on the Flotation  
of Galena and Chalcopyrite, by  
S. V. Bessonov, I. N. Plaksin.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel  
Tekh Nauk, Vol I, 1954, pp 114-127.

NLL RTS 1933

Optical Properties of Colloidal  
Solutions of Dyes, by M. V. Savostyanova.  
RUSSIAN, per, Iz Ak Nauk SSSR, Ser Fiz,  
Vol XVII, 1953, pp 747-755.

CSIRO

The Addition of Ethyl Mercaptan to  
Certain Vinyl Esters of Chlorophenols,  
by A. V. Kalabina, N. A. Tyukavkina,  
et al, 8 pp.  
RUSSIAN, per, Iz Sibir Otdel Ak Nauk  
SSSR, No 1, 1962, pp 97-101.

JPRS 14532

Effects of Gas Flow on Rate of Reduction  
of Iron Oxides, by I. A. Kopyrin,  
M. Ya. Ostroukhov.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Chern Metal, No 8, 1961, pp 23-31.

HB 5410

Scientific  
Chemistry (Contd)

Mineral Composition of Fluxed Sinter  
and Special Features of Its Reduction.  
Communication I, by E. I. Leshcinskaya,  
S. T. Rostovtsev.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Chern Metal, No 3, 1962, pp 12-23.

HB 5626

An Investigation of the Effect of  
Complex Formation of Alcohols With  
Electrolytes on the Curves of Physical  
Titration Up to the Turbidity Point,  
by E. K. Nikitin, S. I. Spiridonova.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Khim i Khim Tekh, Vol IV, No 1, 1961,  
pp 33-37.

BISI 2571

Corium Oxides. V. High-Temperature  
X-Ray Examinations of Cerium Oxides,  
by G. Brauer, K. A. Gingerich.  
RUSSIAN, per, Journal of Inorganic and  
Nuclear Chemistry, Vol XVI, 1960,  
pp 87-99.

AERE, Harwell Tr-1967

The Thixotropic Properties of Lubricating  
Grease, by K. I. Klinov, B. I. Leont'yev,  
7 pp.  
RUSSIAN, per, Khim i Tekh Topliv i  
Masel, Vol V, No 3, 1960, pp 17-21.  
9088296

A.C.S.I.L. No 1344

Synthesis and Properties of Esters of  
Arylstearic Acids, by M. G. Rudenko,  
Yu. P. Sobolev, N. S. Yatsenko.  
RUSSIAN, per, Khim i Tekh Topliv i  
Masel, No 12, 1961, pp 7-11.

\*FTD-TT-62-1024

Scientific  
Chemistry (Contd)

Selected Articles From the Russian  
Periodical Khim Prom.

No 2, 1958, pp 16-20.

Oxidative Chlorination of Aliphatic  
Hydrocarbons and the Oxidation of  
Hydrogen Chloride, by Ya. P.  
Choporov.

CSIRO

No 3, 1960, pp 251-254.

Use of Graphite in Chemical  
Apparatus, by Y. Moldavan.

\*U.K. Atomic Energy  
Authority  
Risley, TRG Inf Ser  
103 (C)

No 5, 1960, pp 59-61.

The I - x Diagram for the System  
Water Vapor - Hydrogen, by Anatol  
Selecki, Alexander Blum.

\*FTD-TT-62-1052

Vol VI, 1961, pp 420-424.

Experience in the Use of Automated  
Filter Press for the Isolation of  
Dyestuff Suspensions, by  
M. I. Goldfarb, T. A. Malinovskaya.

NLL RTS 2031

Varnished Cellophane, by L. I.

Speranskiy.

RUSSIAN, per, Khimiya Volokna, No 2,  
1961, pp 33-37.

NLL M. 3527

Preparation of Synthetic Aliphatic  
Alcohols, by V. S. Varmalov, et al.

RUSSIAN, per, Masloboino-Zhirovaya  
Prom', Vol XXIII, 1957, pp 27-30.

CSIRO

Simultaneous Production of Higher  
Aliphatic Alcohols and Acids During  
the Continuous Oxidation of Liquid  
Normal Paraffins, by T. Tsykovskiy,  
E. M. Nobylova.

RUSSIAN, per, Masloboino-Zhirovaya  
Prom', Vol XXIII, No 9, 1957, pp 30-33.

CSIRO

Scientific  
Chemistry (Contd)

Water Content and Some Properties  
of Yeast Grown on Media With Dif-  
ferent Contents of Sodium Salts,  
by M. I. Kaliuzhnyi.  
RUSSIAN, per, Mikrobiologiya, Vol XIX,  
No 4, 1950, pp 338-347.

CSIRO

Use of a Discharge in a Hollow Cathode  
to Determine Admixtures in  $ZrO_2$  - I,  
by Yu. I. Korovin, L. V. Lipis.  
RUSSIAN, per, Optika i Spektroskopiya,  
Vol V, No 3, 1958, pp 334-337.

\*AEC

Strong Interactions -- New Developments  
in Elementary Particle Research, by  
A. I. Alikhanov, 9 pp.  
RUSSIAN, np, Pravda, 25 May 1962,  
p 4.

JPRS 14370

Selected Articles From the Russian  
Periodical Radiokhimiya.

No 5, 1960, pp 537-540. 9087618  
Effect of the Diluent on the  
Extraction of Uranyl Nitrate by  
Tributyl Phosphate, by  
M. F. Pushlenkov, E. V. Komarov,  
O. N. Shuvalov, 6 pp.

U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-42(W)

Vol III, 1961.  
Ser-143(W). Sorption or Radioelements  
From Solutions, by I. E. Starik, et al,  
(pp 144-149).

U.K. Atomic Energy  
Authority  
Risley, TRG Inf

Ser 142(J). Sorption of the Long-  
Lived Fission Products by Soils and  
Clay Minerals, by Yu. A. Lokotov,  
et al, (pp 199-206).

Scientific  
Chemistry (Contd)

Selected Articles From the Russian  
Periodical Radiokhimiya. (Contd)

Vol III, No 3, 1961, pp 348-355.  
A Rapid Method of Determining Thorium,  
Radium, and Lead in Monazites,  
by K. S. Ivanova.

AERE, Harwell Tr-1543

Vol III, No 4, 1961.  
Ser-155(W). Extraction of Americium  
by Tributylphosphate, by V. I.  
Zemlyanukhin, et al, (pp 411-416).

U.K. Atomic Energy  
Authority  
Risley, TRG Inf

Ser-156(W). Separation by Extraction  
of Zr<sup>95</sup> (Without a Carrier) Using the  
n-Dicsylphosphate - CHCl<sub>3</sub> System, by  
S. A. Potapova, (pp 421-427).

The Thermal Properties of a 96% (by  
volume) Solution of Ethyl Alcohol in  
Water, by M. P. Voukalovich, et al.  
RUSSIAN, per, Teploenergetika, No 2,  
1960, pp 70-77.

NLL RTS 2039

Hydraulic Resistance During the Boiling  
of Water Heated to Saturation Temper-  
atures, by P. G. Poletaykin.  
RUSSIAN, per, Teploenergetika, Vol V,  
No 4, 1962, pp 80-83.

\*AEC

Fundamentals of the Crystallography of  
Corundum, by E. S. Rudnitskaya.  
RUSSIAN, per, Trudy Inst Kristallografii,  
Ak Nauk SSSR, No 8, 1953, pp 13-20.

\*Navy/APL

Properties of Isomorphic Mixtures of  
Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>, by S. V. Grum-Grzhimailo.  
RUSSIAN, per, Trudy Inst Kristallografii,  
Ak Nauk SSSR, No 8, 1954, pp 134-145.

\*Navy/APL

Scientific  
Chemistry (Contd)

On the Hydration of the Alumina-Containing Minerals of Portland Cement in the Presence of Micro-Admixtures of Carbonates, by P. P. Budnikov, et al.  
RUSSIAN, per, Tsement, Vol XXVII, No 1, 1961, pp 5-9.

NLL M. 4769

Determination of Oxygen in Metals and Oxides Using Sulfur Monochloride  $S_2Cl_2$  III, by K. E. Kleiner, N. V. Obolonchik, 7 pp.  
RUSSIAN, per, Ukrain Khim Zhur, Vol XXV, 1959, pp 370-373. 9087638

AEC UCRL Tr-801(L)

New Information in Field of Synthesis of Semi-Inorganic Polymers, by K. A. Andryanov.  
RUSSIAN, per, Uspekhi Khim, Vol XXVI, No 8, 1957, pp 895-922.

CSIRO

Present Ideas About the Structure of Nucleic Acids and Their Specifications, by A. L. Belozerskiy, A. S. Spirin.  
RUSSIAN, per, Uspekhi Sovremen Biolog, Vol XLI, No 2, 1956, pp 140-160.

CSIRO

Certain Problems of Biochemical Cybernetics, by A. G. Pasynskiy, 10 pp.  
RUSSIAN, per, Vest Ak Nauk SSSR, No 4, 1962, pp 25-31.

JPRS 14236

Spectral Investigation of Products Formed During Polymerization of Styrene With 9-Vinylnanthracene Additions, by A. S. Cherkasov, K. G. V. Laikina, 10 pp.  
RUSSIAN, per, Vysokomolekulyarnye Soyedineniya, Vol III, 1961, pp 570-.

AEC Tr-5065

Phosphorus-Containing Polymers. III. Application of the Arbuzov Reaction for Polymerizing Ethylene Alkyl Phosphites, by K. A. Petrov, E. Ye. Nifant'yev, et al.  
RUSSIAN, per, Vysokomolekulyarnye Soyedineniya, Vol IV, No 2, 1962, pp 246-249.

\*FTD-TT-62-1058

Scientific  
Chemistry (Contd)

Accurate Continuous Mixing of Gas Flows for Automatic Gas Analysis, by D. I. Ageikin, E. L. Itsokovich. RUSSIAN, per, Zavod Lab, Vol XXIII, 1957, pp 492-496.

CSIRO

The Search for Pharmacologically Active Substances in a Series of Indole Derivatives, by A. V. Niklevich, 7 pp. RUSSIAN, per, Zdravookhraneniya Belorussii, No 3, 1962, pp 38-42.

JPRS 14262

Electrochemical Reaction Mechanism on the Mercury Cathode in Uranium Salt Solutions, by G. S. Tyurikov, et al. RUSSIAN, per, Zhur Fiz Khim, Vol XXXII, 1958, pp 1490-1498.

\*AEC

On the Higher Peroxide of Hydrogen and Frozen Radicals, by I. I. Skorokhodov, L. I. Nekrasov, N. I. Kobozev, 15 pp. RUSSIAN, per, Zhur Fiz Khim, Vol XXXVI, No 2, 1962, pp 274-281. 9677373

FTD-TT-62-634

Experimental Prediction of the Approximate Melting Points of Certain Alloys Belonging to the System NI-TI-CR-NO-W-NB, by F. M. Perel'man, 16 pp. RUSSIAN, per, Zhur Neorgan Khim, Vol VII, No 4, 1962, pp 844-849.

JPRS 14484

Stability and Volatility of Tin Oxides, by V. K. Veselovskiy, 29 pp. RUSSIAN, per, Zhur Prik Khim, Vol XVI, 1943, pp 397-416. 9093512

AEC UCRL Tr-821(L)

The Corrosion of Carbon Steels in Concentrated Nitric Acid Containing Admixtures of Halogens and Their Compounds, by I. P. Mukhanov, S. D. Beskov, 12 pp. RUSSIAN, per, Zhur Prik Khim, Vol XXXIV, No 10, 1961, pp 2282-2288. 9677442

FTD-TT-62-579

Scientific  
Chemistry (Contd)

The Electrochemical Reduction of Nitric Acid at Inert and at Self-Dissolving Cathodes, by Ye. N. Mirolyubev.

RUSSIAN, per, Zhur Prik Khim, Vol XXXV, No 1, 1962, pp 132-138.

\*FTD-TT-62-952

Problems and Present State of the Production of Fluorine Compounds, by A. N. Gogachov.

RUSSIAN, per, Zhur Vses Khim Obshch, Vol VII, No 1, 1962, pp 39-47.

U.K. Atomic Energy Authority  
Springfields Tr-90

Uniform Fluidisation of Spherical Particles, by J. Bena.

CZECH, per, Chemicky Prumysl, Vol VIII, No 10, 1958, pp 516-523.

AERE, Harwell Tr-1572

Chemically Treated Saccharide Binders, by I. Macarsek, V. Lorenz.

CZECH, per, Slevarenstvi, Vol IX, No 2, 1961, pp 41-46.

BISI 2601

Spectrophotometric Methods for the Analysis of Unsaturated Fatty Acids, by N. J. Bernaerts.

DUTCH, per, Vlaamse Chemische Cereniging Mededelingen, Vol XVI, No 5, 1954, pp 159-169.

CSIRO

A Method for Determining the Resistivity of Semiconductors With Relatively High Resistivity, by T. Kytoeniemi, 28 pp.

FINNISH, per, Valtion Tek Tutkimuslaitos Tiedotus, Vol II, No 9, 1961. 9089545

AEC Tr-5085

The Separation of Metallic Elements by Anion Exchange Resins. II. Frontal Analysis and Displacement Development of Zinc and Cadmium Chlorides, by Bernard Tremillon, 14 pp.

FRENCH, rpt, CEA-1943, 1961.

AEC Tr-5098

Scientific  
Chemistry (Contd)

The Separation of Zirconium and Hafnium  
in Sulphuric Solutions Using Anion  
Exchangers, by Bernard Tremillon,  
C. Cornet, M. Thibault, 26 pp.  
FRENCH, rpt, CEA-1944, 1961.

AEC Tr-5099

Uranium Oxide Extrusion, by R. Hauser,  
J. Mercier.  
FRENCH, rpt, EUR-Cnt-1, 1961, 13 pp.

AERE, Harwell Tr-1481

Powder Sintering and Extrusion for the  
Fabrication of U-Al and  $UO_2$  - Stainless  
Steel Disperse Fuel Elements, by L. Meny,  
J. Buffet, et al.  
FRENCH, rpt, 4th Pansee Seminar,  
20-24 Jun 1961.

AERE, Harwell Tr-883

The Irsid Seawater Corrosion Testing  
Station, Principal Results Obtained at  
Biarritz, by A. Hache.  
FRENCH, rpt, Third Metallurgy Colloquium  
on Corrosion of Steel, Jun/Jul 1959,  
Seclay, pp 201-204.

BISI 2775

The Present State of Our Knowledge on  
the Corrosion of Steels by Hydrogen  
Sulphide, by E. Herzog.  
FRENCH, rpt, Third Metallurgy Symposium  
on Corrosion, 1959, Amsterdam,  
pp 217-239.

BISI 2776

Research on the Damage to Wool Caused  
by Alkali, by M. Robinet, R. Bielen.  
FRENCH, per, Annales Textiles, Vol XII,  
No 4, 1956, pp 31-73.

CSIRO 4808

Experimentation on the Diffusion of  
Dyes, by R. H. Peters, J. H. Petropoulos,  
21 pp.  
FRENCH, per, Bull Inst Textile France,  
No 84, 1959, pp 49-68. 9089552

AEC Tr-5091

Scientific  
Chemistry (Contd)

Recarburization of the Open-Hearth Steel Bath by Injecting Crushed Carbonaceous Material, by M. Malrin.  
FRENCH, per, Centre de Documentation Siderurgique Circulaire d'Informations Techniques, Vol XVII, No 3, 1960,  
pp 703-714.

\*BISI 2880

Preparation and Composition of the Metaplumbates of Barium and Strontium, by R. Weiss, 4 pp.  
FRENCH, per, Comptes Rendus Academie des Sciences, Vol CCXLVI, 1958,  
pp 3073-3076. 9088816

A.C.S.I.L. No 1241

Fluidisation Technique Applied to the Construction of a High-Temperature Thermostatic Bath, by H. Kramer.  
FRENCH, per, Genie Chimique, Vol LXXVII, No 2, 1957, pp 25-53.

AERE, Harwell Tr-1505

Apparatus for Measuring Spatial Concentrations in a Current of Water and Air Mixed, by J. Boudan.  
FRENCH, per, La Houille Blanche, 1951,  
pp 406-410.

Univ of Melbourne  
T.160

Study of the Initial Phase of Oxidation of Graphite in Air at 420°-650°C., by E. Bauer.  
FRENCH, per, Journal de Chimie Physique, Vol LVIII, No 47, 1961, pp 47-60.  
9089542

AERE, Harwell Tr-887

Types of Deformation of Beryllium at High Temperature and Recrystallization After Twinning, by P. Bastien, P. Pointu.  
FRENCH, per, J Nuclear Materials, Vol V, No 1, 1962, pp 153-155. 9093448

AEC Tr-5104

Scientific  
Chemistry (Contd)

Influence of the Chemical Composition  
and in Particular the Carbon Content  
on Weldability, by P. Rousseau.  
FRENCH, per, Revue de Metallurgie,  
Vol LVIII, Jun 1961, pp 527-535.

BISI 2747

Process for the Production of  
Deuterium and Its Compounds as Well  
as Other Light Isotopes, by P. Maldague.  
FRENCH, Patent No 1,231,593, 11 Apr 1960.

\*AEC

The Dissociation of Tetrarylhydrazines,  
by H. Wieland, 9 pp.  
GERMAN, bk, Die Hydrazone, Chapter II,  
Stuttgart, 1913, pp 71-78.

Navy Tr 3178/APL  
T-293

Synthetic Poisons, by Karlheinz Lohs,  
(DC-6940).  
GERMAN, bk, Synthetische Gifte, 1958,  
pp 1-212.

\*JPRS

Tetrabiphenylhydrazine (X. Report on  
Aromatic Hydrazones), by H. Wieland,  
A. Susser, 13 pp.  
GERMAN, per, Annalen der Chemie, No 2,  
1911, pp 217-229.

Navy Tr 3179/APL  
T-294

Selected Articles From the German  
Periodical Archiv fuer Eisenhutten-  
wesen.

Vol XXXII, Nov 1961, pp 753-760.  
Investigations of the Distillation  
of Metallic Elements From Liquid Iron  
Under Reduced Pressure, by H. Schenck,  
H. H. Domalski.

BISI 2597

Vol XXXII, Dec 1961, pp 857-861.  
Contribution to the Determination of  
Austenitic Grain Size by Means of  
Oxidation Tests, by D. Schreiber,  
S. Mennenh.

BISI 2762

Scientific  
Chemistry (Contd)

Selected Articles From the German  
Periodical Archiv fuer Eisenhutten-  
wesen. (Contd)

- Vol XXXIII, Jan 1962, pp 23-26. BISI 2805  
Determination of the Solubility of Carbon in Iron Titanium Alloys by Means of Damping Measurements, by W. Koster, J. Haber.
- Vol XXXIII, Feb 1962, pp 91-100. \*BISI 2850  
On Testing a Hydrochloric Acid-Glycol Electrolyte for the Residual Isolation of Chemically Resistant Steels, by A. Baumel, W. Thomisch.
- Vol XXXIII, No 4, Jul/Aug 1962. HB 5636  
Prevention of Caking of Fluidized Beds in the Reduction of Iron Ores, by H. Schenck, et al, (pp 211-216).
- Contribution to the Activity of Carbon in Liquid Iron Alloys, Part I, II, by H. Schenck, et al, (pp 223-232). HB 5637
- Vol LIII, No 3, 1962, pp 141-143. HB 5627  
Dissolution of Refractory Materials, by E. Forster, O. Knacke.
- Chromosomes and Systematics in the Chironomida, by H. Bauer. GERMAN, per, Archiv fuer Hydrobiologie, Vol XL, No 4, 1945, pp 994-1006. Univ of Melbourne T.125
- The Destruction of Hydrocarbons by Microbes, by G. Wolfgang Fuhs, 63 pp. GERMAN, per, Archiv fuer Mikrobiologie, Vol XXXIX, 1961, pp 374-422. JPRS 14362
- The Recrystallisation of Commercial Grade Deep-Drawn Strip as a Function of the Degree of Deformation and Annealing Temperature, by R. Grimm. GERMAN, per, Dander, Bleche, Rohre, Feb 1962, pp 49-61. BISI 2749

Scientific  
Chemistry (Contd)

4-Pyridylpyridinium Dichloride and  
the Synthesis of  $\gamma$  Derivatives of  
Pyridine, by Ernest Koenigs,  
Heinz Greiner, 14 pp.  
GERMAN, per, Berichte der Deutschen  
Chemischen Gesellschaft, Vol LXIV,  
1931, pp 1049-1056.

Navy Tr 3182/APL  
T-297

Single Component Syst ms as a Basis  
of Scientific Ceramic Investigation,  
by E. Ryschkewitsch, 12 pp.  
GERMAN, per, Berichte der Deutschen  
Keramischen Gesellschaft, Vol XVI,  
1935, pp 111-117. 9087673

AEC Tr-5019

Selected Articles From the German  
Periodical Chemische Berichte.

Vol LXXXIX, 1956, pp 2921-2933.  
Syntheses With Pyridylpyridinium  
Halides - Introduction of Halogen,  
of the Thiol and Thiol Ether Groups  
Into the 4-Position of the Pyridine  
Nucleus, by Dietrich Jerschel,  
Hans Fischer, Klaus Thomas.

\*Navy/APL

Vol XVII, No 2, 1958, pp 3316-3319.  
The Conversion of Pyrrole Into  
Pyridine, by M. Dennstedt, J.  
Zimmermann.

\*AERE, Harwell

Vol XCI, 1958, pp 1266-1273.  
Syntheses With Pyridylpridinium  
Halides - Introduction of Substituted  
Amino Groups Into the 4-Position of  
the Pyridine Nucleus, by Dietrich  
Jerschel, Ludwig Jakob.

\*Navy/APL

Vol XCV, No 4, 1962, pp 881-888.  
Investigation of Sulfur-Iodine  
Compounds Preparation of 1-Diodo-1-  
Hydrogen Sulfide in Solution, by  
J. Jander, G. Turk.

\*AEC

Scientific  
Chemistry (Contd)

Sub-Oxide of Low Temperature Oxidation  
of Niobium and Tantalum, by G. Brauer,  
H. Muller, G. Kuhner.

GERMAN, per, Chemisches Laboratorium  
der Universitat Freiburg im Breisgau.

\*AEC

Physical Chemistry of the Wheat Protein  
in Connection With the Baking Values  
of Flours, by A. H. Bloksma.

GERMAN, per, Chemisches Weekblad,  
Vol LII, No 20, 1956, pp 345-351.

CSIRO

Colorimetric Determination of Alpha-  
Amylase, by G. Jongh.

GERMAN, per, Chemisches Weekblad,  
Vol LIII, 1957, pp 597-602.

CSIRO

Observations on the Assessment of the  
Micro-Texture of Surfaces, by D. Becker,  
G. Dornheim, et al.

GERMAN, per, Feingeraete Technik,  
Vol VIII, No 2, 1959, pp 253-260.

CSIRO

Selected Articles From the German  
Periodical Fette-Seifen-Anstrichmittel.

Vol LVII, No 6, 1955, pp 393-399.  
Filter Paper Tests to Determine  
Peroxide Compounds, by K. Taufel,  
R. Vogel.

CSIRO

Vol LXI, No 8, 1959, pp 631-636.  
Paper Chromatography in the Field  
of Fats XXXI: The Separation of  
Mixtures of Synthetic and Natural  
Triglycerides by Means of Paper  
Chromatography, by H. P. Kaufmann, 16 pp.

CSIR Tr No 205

Vol LXII, No 3, 1960, pp 153-160.  
Paper Chromatography in the Field  
of Fats XL. The Separation of  
Fatty Acid Mixtures, by H. P.  
Kaufmann, 20 pp.

CSIR Tr No 206

Scientific  
Chemistry (Contd)

Selected Articles From the German  
Periodical Fette-Seifen-Anstrichmittel  
(Contd)

Vol LXII, No 11, 1960, pp 1014-1020.  
Thin-Layer Chromatography in the Field  
of Fats. I: Separation of Experi-  
mental Mixtures, by H. P. Kaufmann,  
17 pp.

CSIR Tr No 203

Vol LXIII, No 2, 1961, pp 125-132.  
Paper Chromatography in the Field  
of Fats. XLIV: The Pcanalysis of  
Glycerides, by H. P. Kaufmann, 22 pp.

CSIR Tr No 204

Vol LXIII, No 8, 1961, pp 689-691.  
Thin-Layer Chromatography in the Field  
of Fats. III. On Methods for  
Rendering the Substances to be  
Analysed Visible on the Plate, by  
H. P. Kaufmann, 6 pp.

CSIR Tr No 207

The Use of Flushing and Bubbling  
Processes in the Foundry, by E. K. Modi.  
GERMAN, per, Giesserei, Vol XLVIII,  
No 21, 1961, pp 639-647.

HB 5623

Preparation and Properties of High  
Concentration Sols. Part IV: Thorium  
Hydroxide Sols, by N. R. Dhar,  
R. M. Mittra, 13 pp.  
GERMAN, per, Kolloid Zeitschrift,  
Vol LXI, No 2, 1935, pp 172-176.  
9087621

AEC ORNL-TM-231

The Influence of the Exchangeable  
Cations on the Rheological Properties  
and the Grain Size Distribution of  
Kaolinite, by M. Fruhauf, W. Burck,  
26 pp.  
GERMAN, per, Kolloid-Z., Z. fuer  
Polymer, Vol CLXXX, No 2, 1962,  
pp 150-160.

Dept of Commerce  
Natl Bu of Standards

Scientific  
Chemistry (Contd)

Determination of the C-Terminal Amino Acids in Proteins. An Improved Hydrazinolysis Procedure, by T. Kauffmann, F. Boettcher.  
GERMAN, per, Liebig's Annalen der Chemie, Vol DCXXV, No 1/3, 1959, pp 123-132.

CSIRO 4811

Cellulose Crotonates and Cellulose Acetocrotonates, by H. Engelmann, F. Exner.  
GERMAN, per, Makromolekulare Chemie, Vol XXIII, 1957, pp 233-243.

CSIRO

The Electro-Chemical Behaviour of Stainless Steels in Sulphuric Acid, by H. J. Wiester, E. Brauns, W. Schwenk.  
GERMAN, per, Metalloberflache, No 3, 1961, pp 73-76, No 4, 1961, pp 103-107.

\*BISI 2891

Thermodynamic Investigation of Solid Reactions in Silicate Systems, by Babushkin Mischedlow-Petrossian.  
GERMAN, per, Silikattechnik, No 5, 1958, pp 209-212.

CSIRO

Concerning the Influence of the Liquid Phase on the Properties of Magnesite Refractory Materials, by S. Selacolu.  
GERMAN, per, Silikattechnik, Vol XIII, Jan 1961, pp 17-21.

BISI 2845

Studies of Strength, Reducibility, and Softening Behaviour of Sinters, by G. Schwabe, H. Hellermeyer.  
GERMAN, per, Stahl und Eisen, Vol LXXXII, No 8, 1962, pp 449-457.

HB 5614

Comparative Pu Cleanliness of Vacuum-Treated vs. Untreated Plain Carbon Steels, by H. Knuppel, A. Wicher, A. Stumpf, et al.  
GERMAN, per, Stahl und Eisen, Vol LXXXII, No 10, 1962, pp 604-612.

HB 5631

Scientific  
Chemistry (Contd)

Fibre Test Values, by M. Hoffmann.  
GERMAN, per, Textil-Praxis, Vol XIV,  
No 5, 1959, pp 433-435.

CSIRO

Protection Against Corrosion in Sea  
Transport in Tropical Climate, by  
H. Determann.  
GERMAN, per, Werkstoffe und Korrosion,  
Vol VIII, No 11, 1957, pp 689-694.

CSIRO

Selected Articles From the German  
Periodical Z Anorg und Allgem Chem.

Vol CLXI, 1947, pp 287-303.  
9093522

AEC Tr-5111

Acid Decomposition of Iron Carbide,  
by Rudolf Schenck, Robert Stenkhoff,  
19 pp.

Vol CCXLIV, 1940, pp 133-148.  
9093523

AEC UCRL Tr-817

Nitrides of Metals of the First  
Secondary Groups of the Periodic  
Systems, by Robert Juza, Harry Hahn,  
37 pp.

Vol CCCX, 1961.  
Fluorine-Containing Complexes. II. The  
Hydrolysis of Fluorozirconates and  
Condensation of the Hydrolysis Products,  
by L. Kolditz, A. Feltz, 18 pp,  
(pp 204-216). 9093446

AEC Tr-5086

Fluorine-Containing Complexes. III.  
Zirconium Tetrafluoride Hydrate,  
Zirconium Hydroxyfluoride and Their  
Condensation Products, by L. Kolditz,  
A. Feltz, 11 pp, (pp 217-224).  
9093445

AEC Tr-5087

Vol CCCXIV, 1962, pp 206-209.  
High Purification of Sulfur the  
"Black Precipitate", by Von O.  
Skjerven.

\*AEC

Scientific  
Chemistry (Contd)

The Mechanism of the Decomposition of  
Wustite  $\text{Fe}_{1-x}\text{O}$  Below 570°C, by A. Hoffmann.

GERMAN, per, Z fuer Elektrochemie,  
Vol LXIII, No 2, 1959, pp 207-213.

BISI 2766

Types of Reactions Taking Place During  
Oxidation of Alloys, by C. Wagner.

GERMAN, per, Z. fuer Elektrochemie,  
Vol LXIII, Oct 1959, pp 772-790.

\*BISI 2856

A New Quantitative Method of Evaluating  
Spectral Analysis, by L. Paksy.

HUNGARIAN, per, Acta Chimica Hungaricae,  
Vol XXVIII, No 1-3, 1961, pp 17-27.

BISI 2741

Five Years of Work at the Radiochemical  
Laboratory of the Research Institute  
for Heavy Chemical Industry, by  
Andor Almasy, Sandor Orsos, 8 pp.

HUNGARIAN, per, Magyar Kemikusok Lapja,  
Vol XVII, No 2, 1952, pp 71-73.

JPRS 14324

The Structure of Anodic Oxide Coatings  
on Aluminum, by M. Paganelli, 11 pp.

ITALIAN, per, Alluminio, Vol XXVII,  
1956, pp 7-12. 9089538

AEC GAT-Z-5033

The Effect of Bromoform and Chloroform  
on Some Pyrroles, by O. Bocchi.

ITALIAN, per, Gazzetta Chimica  
Italiana, Vol XXX, No 1, 1960, pp 89-96.

\*AERE, Harwell

About the Frequency of Chemical  
Elements, by G. Bussetti, 17 pp.

ITALIAN, per, Il Nuovo Cimento, Vol XII,  
No 9, 1954, pp 769-779. 9089541

AEC UCRL Tr-804(L)

Dielectric Saturation and Intermolecular  
Forces in Liquids, by A. Piekara.

ITALIAN, per, Il Nuovo Cimento, No 1,  
1958, pp 192-198.

CSIRO

Scientific  
Chemistry (Contd.)

Colorimetric Micro-Analysis of Boron  
With Curcumin, by I. Muraki, K. Hiiro.  
JAPANESE, per, Chemical Society of  
Japan Pure Chemistry Section,  
Vol LXXVIII, 1957, pp 845-854.

CSIRO

Improvement in the Method of Deter-  
mining Trace of Copper and Zinc by  
Means of Dithizone, by Y. Morita.  
JAPANESE, per, Journal of the Chemical  
Society of Japan, Vol LXIX, No 10/12,  
1948, pp 174-176.

CSIRO 4740

Catalytic Cracking of Pure Hydro-  
Carbons by Silica-Alumina, Silica-  
Magnesia and Alumina-Boria Catalysts,  
by K. Ikebe, et al.  
JAPANESE, per, Journal of Fuel Society  
of Japan, Vol XXXVII, No 375, 1958,  
pp 431-435.

CSIRO

Effects of Water-Soluble Rust Preventives  
on Mild Steel in Aqueous Solutions, by  
S. Sato, Y. Kato, A. Kawai.  
JAPANESE, per, Kogyo Kagaku Zasshi,  
Vol LXIV, 1961, pp 1013-1017.

BISI 2480

Selected Articles From the Japanese  
Periodical Nippon Genshiryoku Gakkaishi.

Vol II, 1960.  
On the Reactivity of Uranouranic  
Oxide (III). The Influence of  
Specific Surface Area Upon the  
Reactivity of Uranouranic Oxide, by  
Rokuo Ukaji, (pp 389-393).

AEC Tr-5073

Study on the Thermal Cycling Effect  
of Uranium by X-Ray Inverse Pole  
Figure Method (I), Study on Uranium  
Fuel Element (7), by Michio Ichikawa,  
Kiyoaki Taketani, (pp 406-411).

AEC Tr-5076

Scientific  
Chemistry (Contd)

Selected Articles From the Japanese  
Periodical Nippon Genshiryoku Gakkaishi.  
(Contd)

Vol II, 1960.

Process of Formation of Bubbles in  
Irradiated Uranium, by Fumio Hashimoto,  
(pp 518-522).

AEC Tr-5074

On the Reactivity of Uranouranic  
Oxide (IV). Study of the Surface  
Structure of Uranouranic Oxide  
Powder by Electron Microscope-  
Replica Method and X-Ray Diffraction  
Method, by Rokuo Ukaji, (pp 598-602).

AEC Tr-5070

On the Reactivity of Uranouranic  
Oxide (V). On Relation Between  
Reactivity of Uranouranic Oxides  
and Condition of Preparation, by  
Rokuo Ukaji, (pp 731-735).

AEC Tr-5072

Vol III, No 6, 1961, pp 457-461.  
The Formation of  $UC_{1-x}O_x$ , by  
S. Nenba, S. Imota, T. Sano.

AERE, Harwell, Tr-1564

Use of a Condenser in the Rectification  
of Air, by S. Pawlikowski, S. Plesniak.  
POLISH, per, Przemysl Chemiczny,  
No 1, 1962, pp 27-30.

\*FTD-TT-62-100E

Gray Cast Iron Quality Improved by  
Blowing Natural Gas Into Melt, by  
L. Sofroni, C. Cosneanu, E. Nicoloiu.  
ROMANIAN, per, Metalurgia si  
Constructia de Masini, Vol XIV, No 1,  
1962, pp 4-13.

HB 5622

Scientific  
Chemistry (Contd)

Thermodynamic Properties of Binary  
Mixtures of Molten Salts. Deter-  
mination of the Thermodynamic  
Activity From the Electromotive  
Force of Concentration Cells, by  
I. G. Murgulescu, D. I. Marchidan,  
15 pp.

RUMANIAN, per, Studii Cercetari Chim.,  
Vol VII, 1959, pp 461-473. 9093519

AEC Tr-5106

Fabrication of Inflammable Mixture for  
Flame Throwers.  
SERBO/CROATIAN, per, Vojnotechnicki  
Glasnik, No 1, 1962, pp 16-20.

\*525th MI Gp  
I-1609  
ID 2201424

Determination of Xanthate Sulphur in  
Viscose, by W. Fock.  
SWEDISH, per, Svensk Paperstidning,  
Vol LX, No 24, 1957, pp 911, 912.

CSIRO

Scientific  
Electricity

Spiral-Quad Communication Cable With  
Cord-Paper Insulation State Standard  
5008-49, 16 pp.

RUSSIAN, bk, Kabeli, Provode i Shnury  
Elektricheskiye Iad, Ofitsial'noye,  
Moscow, 1960, pp 221-230.

JPRS 14503

Insulator Wet Flashover Characteristic,  
by Merkhalev.

RUSSIAN, per, Elektricheskiye Stantsii,  
Vol XXIX, No 11, 1958, pp 54-59.

CSIRO

Calculation of the Transient Process in  
Composite Linear Circuits by Means of  
Fourier's Integral, by O. V. Mamontov.  
RUSSIAN, per, Elektrichestvo, No 8,  
1956, pp 4-10.

CSIRO

Calculation of Electrical Characteristics  
of a Multi-Layer Dielectric Made From  
Impregnated Capacitor Paper, by  
D. S. Varshavskiy, 18 pp.  
RUSSIAN, per, Elektrichestvo, No 11,  
1961, pp 78-83. 9093504

U. K. Atomic Energy Authority  
Aldermaston, AWRE Tr-36

150 and 200 Million Watt Blocks, 8 pp.  
RUSSIAN, per, Energetik, 3 Apr 1962,  
No 4, pp 1-4.

JPRS 14270

Once Again, On the Lack of Coordination  
in Planning, by A. Kozhin, N. Antonov,  
6 pp.  
RUSSIAN, np, Pravda, 31 Mar 1962, p 2.

JPRS 14270

Some Results of the Work of Power  
System in 1961, by I. I. Bondarev,  
10 pp.  
RUSSIAN, per, Teploenergetica, No 4,  
1962, pp 3-6.

JPRS 14270

Electrification and the Progress of  
Social Production, by A. Beschinskiy,  
19 pp.  
RUSSIAN, per, Voprosy Ekonomiki, No 11,  
1961, pp 29-41.

JPRS 14270

**Scientific  
Electronics**

Electron Paramagnetic Resonance, by  
S. A. Alt'shuler.  
RUSSIAN, bk, Elektronnyy Paramagnitnyy  
Rezonans, 1961, 368 pp.

\*FTD-TT-62-1086

Methods of Analysis of Natural Radio-  
elements, by V. L. Shashkn.  
RUSSIAN, bk, Metody Radioaktivnykh  
Elementov, 1961, 152 pp.

\*AEC

Selected Articles From the Russian  
Papers Nuclear Electronics, Proceedings  
of Conference, Belgrade.

\*AEC

Vol II, 15-20 May 1961.  
Multi-Beam Recording of Pulse Spectrum  
on the Screen of Cathode-Ray Tube Used  
With Ferrite Memory Analyzer, by  
Shtirad Rumler.

Multi-Measuring Magnetic Tape Record-  
ing Systems With Statistic Equalizing,  
by G. R. Zhukov, G. I. Zabiyakin,  
V. D. Shirayev.

A 1024-Channel Time Analyzer With  
Magnetic Drum, by G. V. Rukolaine.

A 256-Channel Measuring and Record-  
ing System, by A. S. Tuchina.

Device for Measuring the Linearity  
and Long-Term Stability of Pulse  
Amplifier Gain, by Ya. Viekha.

Triggered Feed of a Pair of Geiger-  
Mueller Counters, by L. Mitrani,  
B. Betev.

Device for Data Processing From  
Multi-Channel Analyzers, by  
G. A. Matalina, S. I. Chubarova,  
A. S. Tishgashkina.

Scientific  
Electronics (Contd)

Selected Articles From the Russian  
Papers Nuclear Electronics, Proceedings  
of Conference, Belgrade. (Contd)

\*AEC

Multi-Channel Time Analyzer With  
Electrostatic Memory Tubes, by  
K. G. Ignat'yev, I. V. Kirpichnikov,  
S. I. Sukhoruchkin.

A Pulse Scaler Circuit Using New  
Multi-Stable System, by E. Dzhakov,  
A. Markov, K. Sakalyan, B. Shebeshten.

A Neutron Scintillation Counter  
With Low Response for Gamma-Rays,  
by V. G. Brovchenko, G. V. Gorlov.

Controllable Spark Chamber - An  
Apparatus for Observing the Tracks  
of Charged Particles, by  
V. A. Mikhanlov, V. N. Roinishvili,  
et al, (pp 353-359).

On Principles of Constructing Certain  
Types of Automatic Tuning (Adaptive)  
Automatic Control Systems, by  
G. S. Pospelov, 19 pp.  
RUSSIAN, bk, O Printsypakh Postroeniya  
Nekotorykh Vidov Samonastroyushchikhsya  
Sistem Avtomaticheskogo Upravleniya,  
17 pp. 9677336

FTD-TT-62-749

Equipment for Remote Control and  
Operation of a System With Dispersed  
Objectives, by Ye. V. Babicheva.  
RUSSIAN, bk, V sb. Prom Telemekhanika,  
Ak Nauk SSSR, 1960, pp 218-235.

\*FTD-TT-62-1042

Approximate Calculation of the Perme-  
ability of Radio Channels With Random  
Parameters, by R. L. Dobushin,  
Ya. I. Khurgin, B. S. Tsybakov.  
RUSSIAN, bk, Trudy Vsesoyuznogo  
Soveshchaniya po Teorii Veroyatnostey i  
Matemat Statistike, 1958. Yerevan, Ak  
Nauk Armyanskoy SSR, 1960, pp 164-171.

\*FTD-TT-62-1016

Scientific  
Electronics (Contd)

Automatic Control of Prestarting Pre-heaters of Engines, by A. N. Moiseychik, 8 pp.

RUSSIAN, per, Avto Prom, Feb 1962, Rpt No 1539/62. 9665433

500th INTC Gp  
Doc No 106198

An Asynchronous Self-Exciting Alternator, by A. T. Golovan, A. A. Dubenskiy.

RUSSIAN, per, Elektrichestvo, Vol V, 1945, pp 50-52.

NLL RTS 2028

The General Algorithms of a Computing and Controlling Electronic Digital Machine for the Optimum Economic Planning of the Operating Modes of Complex Power Systems, by V. S. Shakmanov, 44 pp.

RUSSIAN, per, Elektrichestvo, No 4, 1962, pp 7-19.

JPRS 14461

On the Employment of a Computing Machine for the Calculation of the Optimum Distribution of Loads Among the Different-Type Units of a Heat-Power Electric Station,

by R. S. Manukhyan, S. V. Paverman, 12 pp.

RUSSIAN, per, Elektrichestvo, No 4, 1962, pp 33-36.

JPRS 14464

Steady-State Conditions of an Alternator With Ionic Excitation, by Sh. I. Lutidze, O. K. Maglaperidze.

RUSSIAN, per, Elektroenergetika, No 2, 1960, pp 94-104.

\*FTD-TT-62-1043

Investigation of a Controlled Motor Drive Fed From an Ionic Frequency Convertor With an Intermediate Rectified Current Circuit, by M. Z. Khamudkhanov.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, No 5, 1958, pp 7-15.

NLL RTS 1387

Filtering in Dynamic Systems Using Laplace Transforms, by N. P. Sevatiyanov.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Energet i Avtomat, No 6, 1961, pp 47-51.

\*Navy/APL

Scientific  
Electronics (Contd)

Experimental Investigation of Ignition  
of Mine Gas by Sparks From Electrical  
Circuits at Different Frequencies, by  
A. V. Itin.  
RUSSIAN, per, Iz Dnepropetrovskogo  
Gornogo Inst, Vol III, 1955, pp 191-200.

NLL RTS 2067

The Mathematical Equipment for the  
Analysis and Synthesis of Linear Multi-  
Tact Coding Networks, by I. A. Nazarov.  
RUSSIAN, per, Iz Leningrad Elektrotekh  
Inst, No 39, 1959, pp 153-162.

\*FTD-TT-62-1017

Method of Increasing Interference Resist-  
ance of Digital Systems of Automatic  
Control, by Yu. M. Korshunov.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Prib, Vol IV, No 5, 1961, pp 76-83.

\*FTD-TT-62-1108

Generators and Amplifiers of Light, by  
N. G. Basov, O. N. Krokhin, J. M. Popov.  
RUSSIAN, per, Priroda, No 12, 1961,  
pp 16-25.

\*Navy/APL

Effect of the Electro Magnetic Fields  
on the Central Nervous System, by  
Yu. A. Kholodoyl.  
RUSSIAN, per, Priroda, No 4, 1962,  
pp 104-106.

\*FTD-TT-62-1107

Exact Method of Investigating Periodic  
Modes in an Extremal Pulse-Regulation  
System, by Ye. Yu. Benua, 18 pp.  
RUSSIAN, per, Sbornik Rabot po Voprosam  
Elektromekhaniki, No 5, 1961, pp 84-94.

JPRS 14417

The Optimal Reception of a Parameter  
Which Is Transferred Through a Channel  
With Noises Containing Multiplicative,  
Additive and Time Components, by  
V. I. Siforov, B. S. Fleyshman.  
RUSSIAN, per, Sbornik Trudov - Nauchno-  
Tekh Obshch Radio-tekh i Elektrosvazi  
imeni A. S. Popova, No 3, 1959, pp 3-17.

\*FTD-TT-62-1018

Scientific  
Electronics (Contd)

On the Ideal Reception of a Parameter  
Transmitted Through a Communication  
Channel for a Small Number of Rays, by  
G. B. Linkovskiy.

RUSSIAN, per, Sbornik Trudov - Nauchno-  
Tekh Obshch Radio-t kh i Elektrosvazi  
imeni A. S. Popova, No 3, 1959, pp 18-33.

\*FTD-TT-62-1018

A Method of Radio Communication Using  
the Moon, by N. A. Kalashnikov, V. A. Smirnov,  
6 pp.

RUSSIAN, Patent No 132,680 (652243/26)  
28 Jan 1960. 9677434

FTD-TT-62-441

A Method of High-Vacuum Ionic Focusing  
of Electron Flow, by N. S. Zinchenko,  
A. P. Motornenko.

RUSSIAN, Patent No 139,022, Appl  
No 668747/16, 2 Jun 1960.

\*FTD-TT-62-966

A Telemetering System for Objects With  
a Greater Number of Reception Points  
Than Transmission Points, by  
A. M. Bogomolov, G. I. Litvinov.

RUSSIAN, Patent No 141,679, Appl  
No 663698/26, 16 Apr 1960.

\*FTD-TT-62-969

Deformation of Traveling Magnetic  
Fields Under the Surface of Conductive  
Mediums, by Jaroslav Schilder.  
CZECH, per, Elektrotechnicky Casopis,  
No 5, 1961, pp 287-309.

\*FTD-TT-62-981

Approximate Solution of Automatic  
Control Circuits With Unsymmetrical  
and Multivalued Nonlinearities, by  
Stanislav Kibik.

CZECH, per, Elektrotechnicky Casopis,  
No 9, 1961, pp 566-579.

\*ACSI I-1616  
ID 2201422

Scientific  
Electronics (Contd)

The Frequency Characteristics of the  
Czechoslovak Electricity Supply System,  
by V. Hodousek, Z. Trojanek.  
CZECH, per, Energetika, Vol X, No 4,  
1960, pp 161-165.

NLL M. 4778

An Elliptically Polarized Antenna  
Irradiated by an Elliptical-Conehorn,  
by J. Musil, L. Obruca.  
CZECH, per, Slaboproudý Obzor, Vol XXIII,  
No 2, 1962, pp 79-83.

\*FTD-TT-62-991

Impedances of Beaming of Bands and  
Plates. Their Acoustic Relation To  
the Medium of Propagation, by  
S. Lowenthal, P. Tournois.

FRENCH, rpt, Compagnie Generale de  
Telegraphie Sans Fil, Document  
No 2108, R.S., C.S.F./D.P.A. SL/DC,  
19 Feb 1962.

\*Navy/NRL

Transhorizon Microwave Equipping Program  
in Algeria and the Sahara, 6 pp.

FRENCH, per, L'onde Electrique, No 394,  
1960, pp 19-23.

ACSI H-8742-A  
ID 2163955

The Medea-Laghouat-Ouargla Microwave  
Link, 5 pp.

FRENCH, per, L'onde Electrique, No 394,  
1960, pp 32-38.

ACSI H-8742-B  
ID 2163955

The Use of Turbo-Alternators as Synchronous  
Capacitors, by Y. Enault.

FRENCH, per, Revue Generale de l'Electricité,  
Vol LXV, No 3, 1956, pp 153-164.

CSIRO

A Circuit Arrangement for Synchronizing  
an Oscillator With a Control Oscillation,  
9 pp.

FRENCH, Patent No 1,201,550, Granted  
15 Jul 1959, Pub 30 Dec 1959.

Navy Tr 3186/NRL 889

Scientific  
Electronics (Contd)

The Completion System of Electromagnetic Natural Oscillations of Uniaxial Cavity Resonators, by Erich Hafner.

GERMAN, per, Archiv der Elektrischen Übertragung, Vol VII, No 1, 1953, pp 47-56.

\*Navy/APL

Direction of Curvature of Impedance Locus Curves for Real and Idealized Two-Terminal Networks, by H. Walter.

GERMAN, per, Archiv der Elektrischen Übertragung, Vol XI, 1957, pp 359-365.

CSIRO

A Reactor for Investigating the Radiochemical Effects of Electric Discharges at High Temperatures, by G. Foldiak.

GERMAN, per, Chemische Technik, No 12, 1961, pp 748, 749.

\*FTD-TT-62-982

Effect of Shortcircuit Automatic Switching on the Electric Drives, by F. Metzger.

GERMAN, per, Elektrotechnische Z., No 10b, 1958, pp 237-239.

CSIRO

Tetrode Television Transmitters for the IV/V Band, by U. Finkbein, J. Holle, S. Tobies.

GERMAN, per, Elektrotechnische Z., Vol LXXI, No 9, 1960, pp 332-338.

\*AERE, Harwell Tr-1639

The Duoplasmatron as an Injector of Ions or Electrons of Extremely High Emission-Current Density, by M. von Ardenne, Dresden, 14 pp.

GERMAN, per, Experimentelle Technik der Physik, No 5, 1961, pp 227-235.  
9677381

FTD-TT-62-480

Critical Considerations for X-Ray Television With the Image Orthicon and the Vidicon, by R. Janker, A. Stangen.

GERMAN, per, Fortschritte auf dem Gebiete der Rontgenstrahlen und der Nuklearmedizin, Vol XCVI, No 5, 1962, pp 630-636.

\*AERE, Harwell Tr-1645

Scientific  
Electronics (Contd)

Electronic Measuring and Automatic  
Elimination of Thickened Portions  
of Yarns, by H. Vogt.  
GERMAN, per, Melliand Textilberichte,  
Vol XL, No 9, 1959, pp 971-975.

CSIRO 4774

Nonlinear Behavior of Junction Transistors  
at Higher Frequencies, by R. Paul.  
GERMAN, per, Nachrichtentechnik, Vol XI,  
No 5, 1961, pp 213-220.

\*Navy/APL

Horn-type Parabolic Reflector, by  
H. K. Neske.  
GERMAN, per, Nachrichtentechnik, No 1,  
1962, pp 13-17.

\*FTD-TT-62-992

Influence of Heat Treatment at Tempera-  
tures Well Below  $Ac_1$  on High-Carbon  
Drawn Steel Wires, by G. Testero,  
M. Palomba.  
ITALIAN, per, Metallurgia Italiana,  
Aug 1961, pp 474-482.

BISI 2748

On the Elimination of the Edge Effect  
of Electrodes in the Breakdown of Solid  
Dielectrics, by Yukio Saito, 18 pp.  
JAPANESE, per, Denki Gakkai Zasshi,  
Vol LVI, 1936, pp 1036-1041. 9089546

AEC SCL-T-420

Three Terminal Esaki-Diodes (Control  
Method of Esaki-Diodes), by  
Toshiya Hayashi, Yoshio Sunohara.  
JAPANESE, per, Journal of the Insti-  
tute of Electrical Communication  
Engineers of Japan, Vol XLIV, No 5,  
1961, pp 805-810.

\*Navy/NRL

The General Solution of the Problem  
of a Radiating Slot in a Cylinder With  
an Arbitrary Cross-Section, by  
P. Szulkin.  
POLISH, per, Archiwum Elektrotechniki,  
Vol X, No 2, 1961, pp 297-308.

\*FTD-TT-62-1060

Scientific  
Electronics (Contd)

Electrical Insulating Papers, by J. Buck,  
A. Winczakiewicz.

POLISH, per, Przeglad Papierniczy, 1959,  
pp 241-244.

NLL M. 4711

"Ewa" Nuclear Reactor.

POLISH, np, Zolnierz Wolnosci, 31 May 1962,  
Ousarma, Poland, Encl To R-313-62.

ID 2204324

Scientific  
Engineering

Friction and Wear in Machinery, by  
M. Khrushchev, 263 pp.  
RUSSIAN, Vol XIII.

ASME

Spectral Well Logging, by B. Ya. Kudymov.  
RUSSIAN, bk.

\*Elsevier Pub. Co.

Dynamic and Fluctuation Errors of  
Controlled Objects, by A. N. Shchukin.  
RUSSIAN, bk, Dinamicheskiye i  
Flyuktuatsionnyye Oshibki Upravlyayemykh  
Ob'yektov, Moscow, 1961, Chapters 4-13.

\*FTD-TT-62-1087

Power Engineering in the USSR, 853 pp.  
RUSSIAN, bk, Energetika, SSSR, 1961,  
pp 1-380.

JPRS 14283

Study of Pressure Pulsations in the  
Stream of a Two-Phase System, by  
I. I. Pavlov, 16 pp.  
RUSSIAN, bk, Issledovaniye Pul'satsiy  
Dableniya v Potokye Dvukhfaznoy Sryedy.

CSIR Tr No 208

Contact Pressing of Glass Textolite  
Aircraft Parts, by B. P. Terebenin, 42 pp.  
RUSSIAN, bk, Izgotovleniye Steklotekstoli-  
tovykh Samoletnykh Detalej Detodom  
Kontaktnogo, Instkructions No 691-58,  
8 Mar 1958, 41 pp. 9677414

FTD-TT-62-250

Problem of Employing Automatic Tuning  
Systems for the Automation of Processes  
Connected With the Construction of  
Automatic Control Systems, by  
V. K. Chichinadze, O. A. Charkviani, 23 pp.  
RUSSIAN, bk, K Doklady "K Voprosy  
Primeneniya Samomastraivayushchikhsya  
Sistem Dlya Avtomaticheskogo Upravleniya,"  
20 pp. 9677339

FTD-TT-62-748

Scientific  
Engineering (Contd)

Quality Control in Field Welding, by  
I. Ye. Neyfel'd, A. S. Fal'kevich,  
92 pp.  
RUSSIAN, bk, Kontrol'kachestva Svarki  
na Stroitel'stve, 1960, pp 57-86,  
93-121, 148-161. 9677439

FTD-TT-62-274

Designing Sandwich Panels, by  
A. Ya. Aleksandrov, L. E. Bruykner,  
et al, 316 pp.  
RUSSIAN, bk, Raschet Trekhslonykh  
Paneley, 1960, pp 1-271. 9677644

FTD-TT-62-206

A Method of Designing an Automatic  
Control System With a Near Optimum  
Transient, by A. V. Rozanov,  
V. I. Kukhtenko.  
RUSSIAN, bk, v sb Samoletnoye Elektrooborud,  
No 1, 1960, pp 62-69.

\*FTD-TT-62-973

Present Status and Trends in the Develop-  
ment of Machine Building and Instrument  
Making Technology, by A. N. Gavrilov,  
V. V. Matveyenko, 36 pp.  
RUSSIAN, bk, Sovremennoye Sostoyaniye i  
Napravleniya Razvitiya Tekhnologii  
Mashinostroyeniya i Priborostroyeniya,  
Moscow, 1960, pp 3-12, 553-564.

JPRS 14435

Thermal Power Engineering for Nuclear  
Installations, by B. V. Petunin, 299 pp.  
RUSSIAN, bk, Teploenergetika Yadernykh  
Ustanovok, 1960, 231 pp. 9677470

FTD-TT-61-241

Thermodynamic Calculations of Rocket  
Engines, by B. A. Nikolayev, 193 pp.  
RUSSIAN, bk, Termodynamicheskiy Raschet  
Raketnykh Dvigateley, 1960, pp 1-147.  
9677645

FTD-TT-62-271

Scientific  
Engineering (Contd)

Precision Calculation in Computer Construction. Mechanical Units and Devices in Mechanical and Electronic Computing Machines, by P. M. Abd rashitov, N. I. Grevennikov, et al, 254 pp.  
RUSSIAN, bk, Tochnostnyye Raschety v Schetnom Mashinostroenii. Gosudarstvennoye Nauchno-Tekhnicheskoye Izdatel'stvo Mashinostroitel'noy Literatury, Moscow, 1960.

\*FTD-TT-62-988

Centralized Control of Technological Processes, by I. M. Shenbrot, 165 pp.  
RUSSIAN, bk, Tsentralizovanny Kontrol' Tekhnologicheskikh Protsessov, No 40, 1961, 97 pp.

JPRS 14389

Digital Differential Analyzers, by A. V. Shileyko, 87 pp.  
RUSSIAN, bk, Tsifrobyye Differentsial'nyye Analizatory.

\*FTD-TT-62-989

A Method of Analyzing the Dynamics of Follow-up Systems With a Hydraulic Motor-Stage, by V. A. Khokhlov.  
RUSSIAN, bk, Voprosy Pnevmo i Gidroavtomatiki, Institut Avtomatiki i Telemekhaniki, Izdatel'stvo, AN SSSR, Moscow, 1960, pp 24-30.

\*FTD-TT-62-986

Compensation-type Hydraulic Presession Unit of Small Dimensions, by V. M. Dvoretskyi.  
RUSSIAN, bk, Voprosy Pnevmo i Gidroavtomatiki, Institut Avtomatiki i Telemekhaniki, Izdatel'stvo, AN SSSR, Moscow, 1960, pp 88-92.

\*FTD-TT-62-986

**Scientific  
Engineering (Contd)**

Selected Articles From the Russian  
Periodical Avtomatika, No 5, 1961.

JPRS 14390

Using the Conditioned Probabilities  
Method in Making a Medical Diagnosis,  
by M. O. Kulykov, 7 pp, (pp 13-19).

Comparative Investigation of Methods  
for Displacing the Operating Point  
From the Extremum, While Maintaining  
a Given Slope of the Characteristic  
Curve of the Controlled Member, by  
V. I. Vasyl'yev, 25 pp, (pp 20-31).

Fixed and Variable Conditions of  
Operation of an Optimizing System  
for Control of a Hydraulic Giant,  
by B. Yu. Mandrovs'kiy-Sokolov, 22 pp,  
(pp 32-41).

An Analysis of Static Errors of a  
System for Automatic Rolled Strip  
Speed Measurement by the Correlation  
Method, by P. I. Dekhtyarenko,  
S. F. Kozubovskiy, 15 pp, (pp 42-48).

Velocity Transducers for River Craft,  
by O. F. Chernysh, 12 pp, (pp 49-53).

Automation of the Process of Establishing  
and Maintaining the Most Advantageous  
Procedure in the Turbine Drilling of  
Oil Wells, by A. I. Dryakhlov,  
R. M. Fedan, 6 pp, (pp 54-58).

Modelling Self-Tuning Automatic  
Control Systems, by V. I. Ivanenko,  
7 pp, (pp 59-61).

Stability of Systems With Multiplying  
Compound Links, by V. I. Kostyuk,  
4 pp, (pp 62-64).

Scientific  
Engineering (Contd)

Selected Articles From the Russian  
Periodical Avtomatyka, No 5, 1961.

JPPS 14390

Triphasal Transforming Apparatus  
for Reversing Rectified Current  
in Galvanic Baths, by L. M. Bykov,  
K. O. Lypkivs'kiy, 10 pp, (pp 65-68).

Some Analysis and Synthesis Questions  
of the Centralized Control Systems  
for Exposure or Deflection Beyond the  
Presumable Limits, by O. S. Belima,  
9 pp, (pp 69-72).

Sequential Decipher on the Magnetic  
Elements, by B. K. Skyrta, V. A. Stulov,  
8 pp, (pp 73-76).

Automatic Control System for a  
Hydraulic Monitor, by V. M. Kuntsevych,  
B. Yu. Mandrovs'kiy, 8 pp, (pp 77-82).

The Use of Cross-Correlations in the  
Adaptation of Control Systems, by  
S. F. Kosubovs'kiy, 22 pp, (pp 83-89).

Statement of the Proceedings of the  
Second Conference on the Theory of  
Invariance and Its Adaptation in  
Automatic Systems, 4 pp, (pp 90, 91).

On the Optimal Value of Trail Steps  
of Extremal Systems, by O. A. Fel'dbaum,  
4 pp, (pp 92, 93).

Scientific and Technical Conference on  
Checking Materials Without Destroying  
Them, by V. A. Tsechal', 8 pp.  
RUSSIAN, per, Avto Svarka, No 10, 1961,  
pp 91-93. 9677379

FTD-TT-62-564

Apparatus for Nondestructive Inspection of  
Welded Joints, by A. A. Trushchenko, 15 pp.  
RUSSIAN, per, Avto Svarka, No 11, 1961,  
pp 86-94. 9677349

FTD-TT-62-565

**Scientific  
Engineering (Contd)**

Hysteresis Motor, by L. Bajza.  
RUSSIAN, per, Elektrichestvo, Vol XLVIII,  
1955, pp 263-267.

CSIRO

An Electrostatic Generator, by N. G. Drozdov,  
A. I. Kukarin, R. S. Savashkevich, 8 pp.  
RUSSIAN, per, Elektrichestvo, No 4, 1961,  
pp 48-50. 9677447

FTD-TT-62-35

**Selected Articles From the Russian  
Periodical Energomash.**

No 8, 1961, pp 42-45.

\*FTD-TT-62-1025

The Influence of Thermophoresis on  
the Process of Deposition of Ash  
Particles on Colled Blades of Gas  
Turbines, by S. Sh. Rozenberg.

No 10, 1961.

An Investigation of Air-Jet Cooling  
of Gas-Turbine Discs, by L. A. Dorfman,  
Yu. S. Osharov, (pp 23-26).

\*FTD-TT-62-1023

Causes of the Destruction of Pipes  
of Steam Superheaters Made of Steel,  
1 Kh 18N 12T, by A. V. Tanyukovich,  
(pp 27-30).

\*U.K. Atomic Energy Authority  
Risley, TRG Inf Ser 191 (R)

An Experimental High-Temperature  
Gas Turbine Type (OGT-850) TsKTI, by  
I. M. Yefimov, (p 48).

\*FTD-TT-62-1023

No 2, 1962.  
Peculiarities of Machining Herring-  
bone Surfaces on Turning Cathes, by  
A. V. Belov, (pp 3-8).

U. K. Atomic Energy Authority  
Springfields Tr-92

An Investigation of the Influence of  
Combustion Products of Sulphurous  
Distillate Fuels on the Constructional  
Materials of Gas Turbines, by  
B. V. Losikov, A. D. Fat'yanov,  
Yu. V. Mikulin, (pp 34-36).

\*FTD-TT-62-1026

**Scientific  
Engineering (Contd)**

Mathematical Analysis and Determination of the Strength of Lump Material, by K. I. Syskov.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, No 2, 1940, pp 41-48.

BISI 2398

Selected Articles From the Russian Periodical Iz Ak Nauk SSSR, Otdel Tekh Nauk, Mekh i Mash.

No 6, 1959, pp 7-13. 9677422  
Fusion of a Plate Around Which a Supersonic or High Temperature Gas Stream is Directed, by A. B. Vatazhin, 11 pp.

FTD-TT-62-433

No 1, 1961, pp 114-120. 9677446  
The Effect of Viscosity on the Flow in the Region of a Straight Compression Shock, by A. I. Zubkov, L. I. Sorkin, 13 pp.

FTD-TT-62-172

No 4, 1961, pp 26-32.  
The Effect of Radial Flow Between a Rotating Disc and a Casting on Their Windage Torque and Heat Transfer, by L. A. Dorfman.

\*FTD-TT-62-1038

No 1, 1962, pp 42-51.  
Heat Transfer in a Flow of Rarefied Gases About a Cylinder, by M. N. Ilakov, S. P. Perov.

\*FTD-TT-62-1091

Investigation of the Vibrations of Turbojet Motors, by M. I. Levit.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Aviats Tekh, No 1, 1958, pp 146-149.

MLL N. 4775

Vibrations of Non-Uniformly Heated Turbine Discs, by V. A. Strunkin.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Aviats Tekh, No 1, 1958, pp 155-170.

MLL N. 4776

Scientific  
Engineering (Contd)

Simultaneous Vibrations of Shafts,  
Discs, and Rotor Blades of Turbo-  
Compressors, and Critical Rotative  
Speeds Concerned, by D. V. Khronin.  
RUSSIAN, per, Iz Vysshikh Ucheb  
Zaved, Aviats Tekh, No 1, 1958,  
pp 171-178.

NLL M. 4772

Selected Articles From the Russian  
Periodical Iz Vysshikh Ucheb Zaved,  
Chern Metal.

No 8, 1960, pp 81-87.  
The Ideal Shape for a Piercing Mill  
Plug, by V. V. Shveikin.

BISI 2785

No 9, 1961, pp 191-197.  
Study of Operating Data of Rotor  
Process, by V. A. Romenets, et al.

HB 5437

No 2, 1962, pp 31-38.  
Special Features of Control of the  
Thermal Conditions in the Blast  
Furnace With Natural-Gas Injection,  
by V. I. Loginov, G. G. Efimenko.

HB 5565

No 3, 1962, pp 30-37.  
Uniformity of Particle Size of  
Blast Furnace Charge and Utiliza-  
tion of Gas Flow, by V. E. Levchenko,  
A. A. Gimmel'farb.

HB 5628

The Principle of Instrument Construction  
for Generating the Random Shape of  
Electrical Signals, Based on the Appli-  
cation of Radioactive Decay as a Start-  
ing Point, by V. F. Nesteruk,  
N. N. Porfir'yeva.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Prib, Vol IV, No 3, 1961, pp 135-140.

\*FTD-TT-62-1033

Scientific  
Engineering (Contd)

Applying Probability Methods of Solving  
Certain Nonlinear Problems of the  
Applied Gyroscope Theory, by A. A. Sveshinkov.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Prib, Vol IV, No 4, 1961, pp 39-47.

\*FTD-TT-62-1034

The Motion of a Gyroscope Mounted on  
a Vibrating Platform With Its Rotor  
Not Precisely Set on the Shaft, by  
I. M. Budnyatskiy, Ya. L. Lunts, 12 pp.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Prib, Vol IV, No 6, 1961, pp 78-87.  
9677443

FTD-TT-62-633

Focusing and Adjustment of the Injector  
Beam of the Linear Accelerator, by  
Yu. N. Antonov, L. P. Zinov'yev,  
I. V. Kozhukhov, 23 pp.  
RUSSIAN, per, Joint Inst for Nuclear  
Research, Dubna, JINR-P-855. 9093483

AEC UCRL Tr-814

Design of Multistage Apparatus With a  
Fluidized Bed of Granular Material,  
by L. A. Kopyan.  
RUSSIAN, per, Khim Prom, No 11, 1961,  
pp 769, 770.

U.K. Atomic Energy Authority  
Springfields Tr-81

Semiconductor Heat-Transfer Intensifiers  
and Heat Insulators, by V. S. Martynovskiy,  
V. A. Nayer, 8 pp.  
RUSSIAN, per, Kholodil Tekh, No 3, 1961,  
pp 4-7. 9677365

FTD-TT-62-167

Thermoelectric Refrigerator Operating  
on Heat Energy, by I. N. Pomazanov,  
P. L. Tikhomirov.  
RUSSIAN, per, Kholodil Tekh, Vol XXXVIII,  
No 4, 1961, pp 24-27. 9093507

AEC Tr-5105

New Method of Vulcanizing the Joints  
of Conveyor Belts, by K. J. Aleksandrov.  
RUSSIAN, per, Koks i Khimiya, No 12,  
1958, pp 46-49.

CSIRO

Scientific  
Engineering (Contd)

Parachutes With Rotating Canopies, by  
I. Glushkov.

RUSSIAN, per, Kryl'ya Rodiny, No 12,  
1961, pp 24-26.

\*FTD-TT-62-983

Cold Thread Rolling on Long Screws, by  
M. M. Volkov.

RUSSIAN, per, Kuznechno-Shtampovochnoe  
Proiz, Vol II, No 4, 1961, pp 1-5.

BISI 2696

New Technological Process for Producing  
Hollows for Railroad Car Axles, by  
A. I. Tselikov, et al.

RUSSIAN, per, Kuznechno-Shtampovochnoe  
Proiz, No 5, 1961, pp 4, 5.

\*BISI 2889

Automatic Compensation of Tilting Move-  
ment of the Ram in Hydraulic Forging  
Presses, by B. V. Rozanov, V. P. Lints.  
RUSSIAN, per, Kuznechno-Shtampovochnoye  
Proiz, No 6, 1961, pp 38-43.

\*BISI 2885

The Technique of the Preparation in the  
Centrifugal Casting of Pipes, by  
I. B. Khazan.

RUSSIAN, per, Lit Proiz, No 4, 1956,  
pp 10-12.

\*BISI 2882

Metallurgical Problems in the Centri-  
fugal Casting of Pipes, by I. B. Khazan.  
RUSSIAN, per, Lit Proiz, No 4, 1957,  
pp 1-4.

\*BISI 2883

Errors in the Control of the Gas Flow  
and the Distribution of Materials in  
the Throat, by Yu. A. Orlov.

RUSSIAN, per, Metallurg, Vol VI, No 6,  
1961, pp 7-9.

MT 220

The Determination of the Optimum Para-  
meters for the Rated Conditions of  
Composite Gas-Turbine Units, by  
V. I. Bulanin.

RUSSIAN, per, Nauch Tekh Informats Byull  
Leningrad Politekh Inst, No 9, 1957,  
pp 26-38.

\*FTD-TT-62-1022

Scientific  
Engineering (Contd)

Cradle of Robots, by D. Pipko, 17 pp.  
RUSSIAN, np, Nedel'ya, No 18,  
29 Apr-5 May 1962.

JPRS 14319

The Effect of Slag Practice on the  
Basic Lining of Oxygen Blown Con-  
verters, by I. I. Korobov,  
S. B. Golbetzand, E. V. Ivanov.  
RUSSIAN, per, Ogneupory, Vol XXIV,  
No 11, 1959, pp 510-517.

BISI 2556

Mechanization of Under-the-Ice Fishing,  
by N. S. Fershtut, B. S. Torban.  
RUSSIAN, per, Ryb Khoz, No 3, 1953,  
pp 21-24.

Univ of Melbourne  
T.129

Hydraulic Seal of the Charge Distri-  
butor When Working at Elevated Top  
Pressure, by A. A. Storozhnik.  
RUSSIAN, per, Stal', No 4, 1956,  
pp 367, 368.

BISI 2238

Instrument for Determining the Latent  
Periods of Motor Reactions, by  
I. N. Sal'chenko, I. M. Kozlov, 3 pp.  
RUSSIAN, per, Teoriya i Praktika Fiz  
Kul'tury, Vol XXIV, No 1, 1961,  
pp 67-69.

JPRS 14278

Experimental Investigation of the  
Specific Heat of Steam in the Sub-  
Critical Region, by A. M. Sirota,  
D. L. Timrot.  
RUSSIAN, per, Teploenergetika, No 7,  
1956, pp 16-23.

NLL RTS 1964

An Investigation of the Operation of  
Turbine Blades at High Velocities, by  
M. E. Deich, A. V. Gubarev.  
RUSSIAN, per, Teploenergetika, No 12,  
1958, pp 56-62.

NLL RTS 2001

Scientific  
Engineering (Contd)

Phase Transition in the Supercritical Region and the Inversion Curve, by D. D. Kalafati.  
RUSSIAN, per, Teploenergetika, No 1, 1961, pp 72-78.

NLL RTS 1958

The Combustion in a Turbulent Stream Restricted by Walls, by A. V. Talantov.  
RUSSIAN, per, Trudy Kazanskogo Aviats Inst, Vol XXX, 1958, pp 225-238.

\*FTD-TT-62-1027

Method of Investigating Automatic Control Systems Containing Linear Elements With Variable Parameters, by N. T. Kuzovkov, 14 pp.  
RUSSIAN, per, Vest Moskov Univ, Ser Mat Mekh, Fiz Khim, No 6, 1958, pp 105-109. 9093502

U. K. Atomic Energy Authority  
Risley, DEG Inf Ser 262 (CA)

On the Dynamics of a Damping Gyroscope, by Lyu Yan'-chzhu, 13 pp.  
RUSSIAN, per, Vest Moskov U, Ser i Mat Mekh, No 4, 1961, pp 48-57. 9677380

FTD-TT-62-434

Machines for Plant Protection, by I. F. Snegovskiy, 7 pp.  
RUSSIAN, per, Zashchita Rasteniy ot Vrediteley i Bolezney, Vol VI, No 4, 1961, pp 41-46.

JPRS 14272

Composition of Liquid Blast-Furnace Iron Checked Without Taking Samples, by A. V. Shayevich, S. B. Shubina.  
RUSSIAN, per, Zavod Lab, Vol XXVIII, No 4, 1962, pp 447-449.

HB 5639

A Method of Stabilization of the Combustion Zone in the Combustion Chambers of Ram-Jet Engines, by A. A. Bulavkin, V. P. Smirnov.  
RUSSIAN, Patent No 131,162, Appl No 469300/40, 8 Jul 1958.

\*FTD-TT-62-965

Scientific  
Engineering (Contd)

An Indirect-Action Pneumo-Mechanical System for Controlling the Number of Revolutions, by N. N. Zakharov, V. T. Bel'kind, 4 pp.  
RUSSIAN, Patent No 134,499, (703034/25),  
7 Jul 1959. 9677348

FTD-TT-61-367

A Device for Magnetic Logging of Drill Holes, by L. A. Mel'nikov, V. I. Andreyev.  
RUSSIAN, Patent No 135,157, 1960.

HB 4781

Method of Measuring a Magnetic Field in Induction Systems of Electrical Prospecting, by B. S. Svetov,  
G. V. Pris.  
RUSSIAN, Patent No 136,481, 10 Aug 1960.

HB 5106

Method of Transformation of Code Rings and Its Implementation, by G. F. Yanbykh,  
4 pp.  
RUSSIAN, Patent No 136,593, 1960.

AEC SCL-T-414

A Method and a Device for Determining the Law of Distribution of Time Position of Pulses by Oscillographic Means, by M. P. Atrazhev, L. M. Dykhenko, 4 pp.  
RUSSIAN, Patent No 136,798 (673266/26),  
14 Jul 1960. 9677418

FTD-TT-62-469

A Method of Cyclically Deflecting an Electron Beam, by G. E. Levin.  
RUSSIAN, Patent No 140,122, Appl  
No 684959/26, 1961.

\*FTD-TT-62-1104

Adjustable Guide Vane Assembly for Radial Centripetal Turbines, by D. A. Dekhovich, V. G. Perfilov.  
RUSSIAN, Patent No 141,356, Appl  
No 696916/25, 10 Feb 1961.

\*FTD-TT-62-967

Scientific  
Engineering (Contd)

The Application of Silicon Varnishes in Communications Engineering, by Zdenek Faix, Frantisek Jirat. CZECH, per, Slaboproudny Obzor, No 4, 1962, pp 229-232.

\*ACSI I-1683  
ID 2203217

Methods and Models of Operations Research,  
by A. Kaufmann.  
FRENCH, bk, 550 pp.

\*Prentice-Hall, Inc.

Application of Extensionmetry to Diverse Methods of Measurement Under High Hydraulic Pressure, by Rapin, Paolicchi, Fulconis. FRENCH, paper, Application de l'Extensometrie Sous Tres Haute Pression Hydrostatique, (Encl to IR-150437).

\*FTD-TT-62-944

Simple Probe Technique in the Blast Furnace Stack,  
by P. Vernisse, G. Schwartz, P. Dancoisne.  
FRENCH, rpt, IRSID, Mineral-Coke-Fonte, RP50, Oct 1960.

BISI 2400

Some Examples of the Use of the Potentiostat in Investigations of the Behaviour of Metals in Liquid Media, by Ph. Berge, P. A. Jacquet. FRENCH, rpt, Third Metallurgy Colloquim on Corrosion of Steel, Jun/Jul 1959, Saclay, pp 175-134.

BISI 2774

Sedan on 6-Cylinder Hotchkiss Chassis,  
3 pp.  
FRENCH, per, Auto Carrosserie, No 97, 1932.

Patent Office  
Sci Lib

Felting Properties of Wool and Animal Hair,  
by M. Leveau.  
FRENCH, per, Bull de l'Institut Textile de France, Vol LXVII, 1957, pp 19-35.

CSIRO 4705

Scientific  
Engineering (Contd)

Selected Articles From the French Periodical  
Centre de Documentation Siderurgique, Circulaire  
D'Informations Techniques.

No 11, 1960.

Electrical Firing of Converter Bottoms in  
Mass, by M. Devernay, (pp 2415-2425).

BISI 2559

Use of Unfired Converter Bottoms at the  
Micheville Works of Sidelor, by H.  
Poissonnier, (pp 2427-2429).

BISI 2560

Vol XVIII, No 6, 1961, p 1461.

Note on Recarburation Tests in the Open  
Hearth Furnace at the Boucane Works of  
C.A.F.L., by P. Karinthy, B. Dupuis,  
L. Septier.

\*BISI E 2881

No 7/8, 1961, pp 1715-1724.

The Modernization of the Dolomite Shop at  
Hagondange, by J. de Hedouville.

BISI 2706

Vol XIX, No 2, 1962.

First Results With the LD Process at Pompey -  
October 1960 to February 1961, by G. Messin,  
(pp 393-399).

\*BISI 2840

Refining a Basic Bessemer Melt by the O.L.P.  
Process, by B. Trentini, (pp 401-404).

\*BISI 2847

The Installation of an O.L.P. Converter at  
Denain (USINOR), by J. Francais, (pp 405-411).

\*BISI 2848

Results Obtained With the O.L.P. Process for  
Refining Basic Bessemer Melts (At Dilling), by  
K. H. Bauer, (pp 413-429).

\*BISI 2849

Setting Up a Unit for the Production of a  
Particular Casting Job in a Foundry, by  
M. Dudouet.

FRENCH, per, Fonderie, Vol CLXXXIV, May 1961,  
pp 171-177.

BISI 2837

Scientific  
Engineering (Contd)

- Pre-Draft in Spinning, by A. Valota.  
FRENCH, per, L'Industrie Textile,  
No 866, 1959, pp 93-99. CSIRO 4623
- Self-Balancing of Rotating Parts, by  
J. E. Plaineaux.  
FRENCH, per, Revue Generale de Mecanique,  
Vol XXXVIII, No 75, 1954, pp 397-440. CSIRO
- High Top Pressure and Various Injections:  
Experience Gained on the International Low-  
Shaft Furnace at Liege, by E. Benneure.  
FRENCH, per, Revue de Metallurgie, Vol LVIII,  
Jan 1961, pp 13-24. BISI 2210
- Refractories for the Checkerwork of Open-  
Hearth Furnaces, by J. Montagnier.  
FRENCH, per, Revue de Metallurgie, Vol LVIII,  
Mar 1961, pp 249-256. BISI 2703
- Guarantees of Shock-Resistance in Specifica-  
tions for Constructional Steel, by M. de  
Kerversau.  
FRENCH, per, Revue de Metallurgie, Vol LVIII,  
May 1961, pp 393-400. BTC 260
- Novel Interlinkable Building Block for Walls  
and Linings, by Raoul Steppe, 4 pp.  
FRENCH, Patent No 524,688. Sci Lib  
Patent Office
- Arrangement of Scaled Compartments for File  
Wrappers or Index Cards, for the Purpose of  
Classification Inspection and File Selection,  
7 pp.  
FRENCH, Patent No 621,500. Sci Lib  
Patent Office
- Use of an Aluminum Alloy for Cast Pieces, Such  
as Wall Fixtures and Similar Objects, 8 pp.  
FRENCH, Patent No 377,873. Sci Lib  
Patent Office

Scientific  
Engineering (Contd)

Improvements in the Construction of Hollow  
Perforated Cylinders, 7 pp.  
FRENCH, Patent no 974,737.

Sci Lib  
Patent Office

Flexible or Articulated Rails and Track  
Bottoms for Toy Trains, by Lucien-Robert  
Marteil, 3 pp.  
FRENCH, Patent No 1,070,586.

Sci Lib  
Patent Office

Support for Rotating Shaft, 9 pp.  
FRENCH, Patent No 1,102,771.

Sci Lib  
Patent Office

Temperature Detector for Journal Boxes,  
Especially for Railroad Equipment, 6 pp.  
FRENCH, Patent No 1,138,967.

Sci Lib  
Patent Office

Improvements in Pneumatic Drills, by Paul-  
Andre Salengro, 27 pp.  
FRENCH, Patent No 1,231,192.

Sci Lib  
Patent Office

The Properties of High Alloy Rotors for Steam  
and Gas Turbines, by W. Stauffer.  
GERMAN, Paper Presented at the Conference on  
Heavy Forging, Terni, Sep 1961.

BISI 2512

Gauging of Roll Forge and Torque in Hot-  
Rolling and Calculation of Compressive  
Strength, by W. Dahl, E. Wildschutz,  
J. Langer.  
GERMAN, per, Archiv fuer Eisenhuttenwesen,  
Vol XXXII, Apr 1961, pp 213-219.

BISI 2782

Automatic Ultrasonic Testing of Bars and Tubes,  
by W. Lehfeldt.  
GERMAN, per, Bander Blech Rohre, Apr 1962,  
pp 131-18.

\*BISI 2871

Scientific  
Engineering (Contd)

Markings and Traffic Signs for Heavily  
Crowded Road-Crossings With Group  
Operation of Traffic in the Net-Work of  
Classified Urban Roads, by E. Radicke.  
GERMAN, per, Bauplanung und Bautechnik,  
Vol IX, No 5, 1955, pp 44-47.

CSIRO

Proposals for the Standardization of Road  
Markings and Guiding Arrangements, by  
E. Radicke, F. Hader.  
GERMAN, per, Bauplanung und Bautechnik,  
No 10, 1955, pp 113-119.

CSIRO

The Distant Recording Seal-Level Gage of the  
Warnemünde Institute for Marine Science, by  
Klaus Voigt.  
GERMAN, per Beiträge Zur Meereskunde, Deutsche  
Akademie der Wissenschaften zu Berlin Institut  
für Meereskunde, No 2/3, Berlin, 1961, pp 40-59.

\*Navy/HO Tr-165

Recent Investigations on the Relationship  
Between Axial Pressure, Rotary Speed, and  
Torque in Rotary Rock Drilling, by H. Meutsch.  
GERMAN, per, Berbau Wissenschaft, Vol II, No 8,  
1955, pp 220-225.

CSIRO 4535

Roll Diameters in Four-High Reversing Stands  
for Heavy Plates, by H. Boos.  
GERMAN, per, Blech, Vol VIII, No 4, 1961,  
pp 243-247.

\*BISI 2884

Equipment for Grading and Stacking of Thick  
and Medium Plates, by W. Becker.  
GERMAN, per, Blech, Vol VIII, No 7, 1961,  
pp 494-497.

\*BISI 2879

The Calculation of Cooling Curves of Bars  
on Cooling Beds and the Suitability of  
Various Cooling Bed Designs, by P. Gruner.  
GERMAN, per, Draht, Vol VII, Nov 1955,  
pp 419-427.

\*BISI 2886

Conditions of Stability for Continuously  
Welded Railway Rails, by F. Raab.  
GERMAN, per, Eisenbahntechnische Rundschau,  
Vol VII, 1958, pp 447-451.

CSIRO

Scientific  
Engineering (Contd)

Effect of Flow Phenomena on Arc Migration in  
Narrow Gaps, by H. G. Schutte.

GERMAN, per, Elektrotechnische Z., Vol LXXXIII,  
1 Jan 1962, pp 16-23.

BISI 2744

Principles and Application of Pneumatic  
Gauging, by A. Wiemer.

GERMAN, per, Feingeratetechnik, Vol VII,  
No 2, 1958, pp 55-61, No 3, pp 132-138.

CSIRO 4714

Experiences With Air Bearings, by R. Lehman,  
19 pp.

GERMAN, per, Feingeratetechnik, No 4, 1960,  
pp 166-172. 9077344

FTD-TT-61-398

On Dust Extraction From Cupola Gases With  
Special Reference to Cost, by E. Weber.

GERMAN, per, Giesserei, Vol XLI, No 6,  
1962, pp 136-142.

\*HB 5613

Sound Insulation of Glasses and Glazing (1)  
Permanently Built-In Windows of Single Glazing,  
by A. Eisenberg.

GERMAN, per, Glastechnische Berichte, Vol XXXI,  
No 8, 1958, pp 297-302.

CSIRO

Relationships Between Preparation, Coke Plant  
and Blast Furnace, by W. Reerink, K. Lemke.

GERMAN, per, Gluckauf, Vol XCIV, 21 Jun 1958,  
pp 832-842.

BISI 1593

On the Technology of Flaxboard Production,  
by J. Swiderski.

GERMAN, per, Holz als Roh- und Werkstoff,  
Vol XVIII, 1950, pp 242-250.

CSIRO

Irregular Hobbing Motion of Gear Cutting  
Machines, Measurement of Causes, by  
R. Piekenbrink.

GERMAN, per, Industrie-Anzeiger, Vol LXXXI,  
No 44, 1955, pp 19-26.

CSIRO 4622

Scientific  
Engineering (Contd)

I. A Few Remarks on the Sealing of Rotating  
and Reciprocating Machine Parts, by E. F. Boon,  
40 pp.

GERMAN, per, Ingenieur, Vol LXIV, No 12, 1952,  
pp 33-40. 9093516

AEC Tr-5109

New Device for Measuring the Mass Flow Rate  
in Refrigeration Plants 1, and 2, by H. Loffler,  
H. Hirschberg.

GERMAN, per, Kaltetechnik, Vol X, No 4, 1958,  
pp 110-112, No 5, 142-147.

CSIRO 4788

Structure Rating Charts as an Aid in the  
Testing of Materials, by Paul Wiest.

GERMAN, per, Materialprüfung, Vol III, No 11,  
1961, pp 418-422.

HB 5506

Selected Articles From the German Periodical  
Melliad Textilberichte.

Vol XXXVI, 1955, pp 1146-1151.

CSIRO

Printing of Polyacrylonitrile Textiles,  
by R. Walter.

Vol XXXIX, 1958, pp 127-133.

CSIRO

Spinning of Pure and Blended Viscose  
Staple, by E. Simon.

Vol XL, No 3, 1959, pp 245-247.

CSIRO

Control of Geared Spinning Pumps, by  
J. Zakrzewski.

Vol XL, No 5, 1959, pp 550-552.

CSIRO

Control of Radiation-Heated Celling  
Tunnels for the Manufacture of  
Leathercloth, by G. Boigs.

Vol XL, No 9, 1959, pp 959-961.

CSIRO 4773

"Perfect" Ring Spinning Machines With  
Continuously Variable Drive Speeds, by  
A Muller, G. Schlese.

Scientific  
Engineering (Contd)

- Pickling of New High Pressure Boilers, by K. Rummel, 13 pp.  
GERMAN, per, Mitt Ver Grosskesselbesitzer, No 53, 1958, pp 92-93. 9093517 AEC Tr-5108
- Supplementary Heating of Electric Furnaces With Oil-Compressed Air-Oxygen Burners, by H. Loscher, M. Piechaczek.  
GERMAN, per, Neue Hutte, Vol VII, No 1, 1962, pp 42-45. HB 5011
- Testing the 90° Flexibility of Packaging Materials, by E. Liebert.  
GERMAN, per, Papier, Vol III, No 19/20, 1949. CSIRO
- Patent Structure of Steel Wire Under the Elect Microscope, by E. Neumann, H. Kofler.  
GERMAN, per, Radex Rundschau, No 6, 1961, pp 747-773. \*BISI 2837
- Construction and Operation of a 200-t. Siemens-Martin Furnace, Maerz-Boelens System, by M. von Takamuka, S. Tsuda, S. Tamamoto.  
GERMAN, per, Radex Rundschau, No 3, 1962, pp 123-132. \*BISI 2864
- Ribbed Tor Steel, by H. Laizner.  
GERMAN, per, Radex Rundschau, Apr 1962, pp 82-88. BISI 2835
- Prestressing Cables for Large Prestressed Concrete Structure, by A. Brandestini.  
GERMAN, per, Schweiz Bauztg, Vol LXXIX, No 6, 1961, pp 81-89. \*U.K. Atomic Energy Authority Risley, TRG Inf Ser 139 (R)
- Centrifuge in Soap Works, by K. L. Weber.  
GERMAN, per, Seifen-Ole-Fette-Wachse, No 9, 1956, pp 211-213. CSIRO
- Starting of Steam Turbines, by H. Haas.  
GERMAN, per, Siemens Zeitschrift, Vol XXXII, 1953, pp 655-673. CSIRO

Scientific  
Engineering (Contd)

Measuring and Regulating Plant for Sewage  
Supervision and Control of Water Courses, by  
R. Schuh.

GERMAN, per, Siemens-Zeitschrift, Vol XXXIII,  
No 9, 1959, pp 556-562.

Univ of Melbourne  
T.123

Contribution to the Examination of Wet Rotary  
Kilns of Long Extent, by G. Bornschein.

GERMAN, per, Silikat Technik, No 4, 1957,  
pp 157-164.

CSIRO

The Gauge-Change Wheel Set, by R. Tackert,  
8 pp.

GERMAN, per, Der Spurwechselradsatz, 1962,  
pp 113-118.

ACSI I-1462  
ID 2198542

Selected Articles From the German Periodical  
Stahl und Eisen.

Vol LXXIX, 3 Sep 1959, pp 1258-1263.

Suitability of a Static Bending Test for  
the Determination of Toughness of Very  
Hard Steels, by K. Bungardt, O. Mulders,  
W. Schmidt.

BISI 2718

Vol LXXXI, 14 Sep 1961, pp 1253-1263.

Development, Production and Properties of  
Wear-Resistant Railway Rails of Natural  
Hardness, by W. Janiche, H. von Hye.

BISI 2639

Vol LXXXI, 26 Oct 1961, pp 1472, 1473.

Present Position of Lining Practice in Large  
Capacity Arc-Furnaces in America, by  
O. Porkert.

BISI 2647

Vol LXXXI, 7 Dec 1961, pp 1729-.

Tests and Calculations on the Drawing  
and Rushing of Round Bars, by O. Pawelski,  
W. Lueg.

\*BISI 2894

Vol LXXXII, No 1, 1962, pp 1-11.

Comparative Evaluation of Hydrogen  
Carriers Injected Into the Blast-Furnace  
Hearth, Part I, by L. von Bogdandy,  
W. Schaefers.

HB 5466

Scientific  
Engineering (Contd)

Selected Articles From the German Periodical  
Stahl und Eisen. (Contd)

- Vol LXXXII, 4 Jan 1962, pp 18-23.  
The Heating Time of Slab Ingots in  
Modern Two-Way Soaking Pits, by  
H. Kreulitsch. BISI 2714
- Vol LXXXII, 29 Mar 1962.  
Investigations on the Problem of Segrega-  
tion in Rimming Steel, by K. Kupzog,  
R. Hammer, H. Rellermeyer, (pp 394-401). BISI 2865
- Contribution to the Problem of Melting  
Steels and Alloys in the Vacuum Induction  
and Vacuum Arc Furnace, by K. Bungardt,  
H. Voliner, (pp 401-419). \*BISI 2876
- Vol LXXXII, 26 Apr 1962, p 539.  
The Development of the Wheel and the  
Present Position Regarding the Manufacture of  
Forged Rolling Stock Wheels, by O. H.  
Lehmann. \*BISI 2877
- Effect of Load on Performance of Electrostatic  
Precipitators, by W. Koglin.  
GERMAN, per, Staub, Vol XXI, No 5, 1961,  
pp 212-215. HB 5617
- Effect of Vibration Frequency and Rate of  
Travel on Some Soil Compressors, by  
A. Platema.  
GERMAN, per, Strassen- und Tiefbau, Vol VIII,  
No 8, 1954, pp 423-425. CSIRO
- New Pneumatic and Hydraulic Elements in  
Measurement and Control Engineering, by  
V. Ferner.  
GERMAN, per, Die Technik, No 6, 1954, pp 359-365. \*ACSI I-1478  
ID 2198540
- New Pneumatic and Hydraulic Elements in  
Measurement and Control Technology, by  
V. Ferner.  
GERMAN, per, Die Technik, No 7, 1954,  
pp 421-427. \*525th MI Gp  
I-1490  
ID 2198500

Scientific  
Engineering (Contd)

Perfecting Twisting Technique, by K. I.  
Korizkij.  
GERMAN, per, Textil Praxis, Vol XI, No 8,  
1956, pp 767-770.

CSIRO

Regulating Systems for Producing Uniform  
Slivers, by W. Wegener, H. Bechlenberg.  
GERMAN, per, Textil Praxis, Vol XIV, No 6,  
1959, pp 552-553, No 7, pp 672-678, No 8,  
pp 774-779, No 10, pp 990-995.

CSIRO 4659

Does the Increase of Spindle Speed and  
Thus the Increase of Production on Ring  
Spinning Machines Result in an Increase  
in Cost per kg or per lb a yarn?  
GERMAN, per, Textil-Praxis, Vol XV, No 9,  
1960, pp 902-905.

CSIRO

Hermelic (Airtight) Molybdenum-to-Glass  
"Solder" Seals, by H. Adam, 9 pp.  
GERMAN, per, Vakuum-Tech, Vol VIII, No 3,  
1959, pp 59-62. 9093442

AEC SCL-T-417

Lubrication and Testing of Lubricants at  
Elevated Temperatures, by A. Bartel.  
GERMAN, per, Verein Deutscher Ingenieure Z,  
Vol CI, No 8, 1959, p 318.

BISI 2852

Converters, by H. Kronmuller.  
GERMAN, per, Verein Deutscher Ingenieure Z,  
11 Oct 1961, pp 1429-1433.

BISI 2678

Comparison of Practical Working Conditions  
of Twist Drills With the Recommended Values  
for Drilling, by W. Leyensetter.  
GERMAN, per, Werkstatt und Betrieb,  
Vol LXXXIX, No 1, 1956, pp 1-12.

CSIRO 4813

Determination of Tapered Staged Dies in  
Horizontal Upsetting Machines, by H. Conrads.  
GERMAN, per, Werkstattstechnik, Vol LII,  
Apr 1962, pp 213-214.

\*BISI 2872

Scientific  
Engineering (Contd)

Grinding of Twist Drills, by G. Rohlke.  
GERMAN, per, Werkstattstechnik und  
Maschinenbau, Vol XLVII, No 5, 1957,  
pp 226-231.

CSIRO 4504

Problems Concerning the Rake Angle on the  
Cutting Edge of Twist Drills, by J. Adam.  
GERMAN, per, Wissenschaftliche Z. der  
Technischen Hochschule Presden, Vol VII,  
No 1, 1957, 1958, pp 157-168.

CSIRO 4682

Fractionation and Outgassing in Oil Diffusion  
Pumps, by W. Bachler.  
GERMAN, per, Z. fuer Angewandte Physik,  
Vol XI, No 12, 1957, pp 612-616.

CSIRO

A Deformation (Strain) Apparatus for the  
Measurement of the Electrical Resistance of  
Metals at Lowest Temperatures, and Investiga-  
tions Into the Plastic Behavior of Copper  
Monocrystals, by Wolfgang Schule, Otto-Buck,  
Eberhard Koster.  
GERMAN, per, Z. fuer Metallkunde, Vol LIII,  
No 3, 1962, pp 172-177.

\*AEC

Method of Depositing Solderable Metallic  
Layers on Ceramics, by Curt Jung-Zaeper.  
GERMAN, Patent Application P.B.-12537,  
Registration No. 2975, 30 October 1944, pp 1-5.

\*AEC

Bearing Capacity of Roads -CBR Test.  
GERMAN, Publ by Standards Association,  
Standard SNV 30315 Adopted July 1953.

Univ of Melbourne  
T.127

Bearing Capacity of Roads - Fundamental  
Principles and Test Methods.  
GERMAN, Publ by Standards Association,  
Standard SNV 40310.

Univ of Melbourne  
T.126

Bearing Capacity of Roads - Plate Test.  
GERMAN, Publ by Standards Association,  
Standard SNV 40317.

Univ of Melbourne  
T.128

Scientific  
Engineering (Contd)

Apparatus for Moistening Roast Meat and For  
Returning Condensed Vapors to the Roasting  
Vessel, by Friedrich Haffner.  
GERMAN, Patent No 164,702.

Sci Lib  
Patent Office

Device for Preventing the Adhesion of Torn  
Paper Strips to Knives Olongitudinal Paper Web  
Cutting Machines, by Firma J. Heinrich Spoerl,  
3 pp.  
GERMAN, Patent No 303,958.

Sci Lib  
Patent Office

Air Purifying and Disinfecting Apparatus, by  
Alexander Haubenwaller, 5 pp.  
GERMAN, Patent No 582,162.

Sci Lib  
Patent Office

Electric Machine, Especially High Speed  
Generator With Separate, Gas Tight Chambers  
for the Stator and the Rotor, 8 pp.  
GERMAN, Patent No 896,086.

Sci Lib  
Patent Office

Method for the Utilization of Internal Radio  
Probes, 8 pp.  
GERMAN, Patent, No 1,112,807.

Sci Lib  
Patent Office

Water Research in Mongolia, by Bela Csath,  
15 pp.  
HUNGARIAN, per, Banyaszati Lapok, Vol XCIV,  
No 1, 1962, pp 54-59.

JPRS 14394

A New Method for Measuring AM to PM Conversion  
and AM Compression, by Tamas Sarkany, 18 pp.  
HUNGARIAN, per, Magyar Hiradastechnika, Vol XII,  
No 2, 1961, pp 45-50. 9077421

FTD-TT-62-193

Design of Surface Wave Lines, by Tibor Berceli,  
35 pp.  
HUNGARIAN, per, Magyar Hiradastechnika, Vol XTI,  
No 2, 1961, pp 51-64. 9077332

FTD-TT-62-156

Vine Prop Rendering Tying of Vine Unnecessary,  
by Dezso Bartal, 4 pp.  
HUNGARIAN, Patent No 1,377.

Sci Lib  
Patent Office

Scientific  
Engineering (Contd)

Selected Articles From the Italian Paper  
Presented at the Conference on Heavy Forging,  
Terni, Sep 1961.

Problems Inherent in the Hardening and  
Tempering of Large High Grade forgings, by  
G. Papuli, N. Moriconi, W. Colantoni.

BISI 2517

The Manufacture of Forging Ingots at the  
Terni Steelworks, by M. Signora, R. Cardano,  
L. Toni.

BISI 2521

Considerations on Modern Shop Practice in  
Heavy Forging, by B. Guarnieri, P. I. A.  
Vincenzoni.

BISI 2522

The Manufacture of a Pressure Vessel for an  
Electro Nuclear Reactor of 508 Thermal MW  
Built of Forged Parts, by C. Tissi, G. Popoli,  
T. Salinetti, et al.

BISI 2523

Improvements in Turbogenerating Sets With  
Homopolar Generators, Part I., by G. D'Albon,  
G. Ailincai, et al, 38 pp.  
ITALIAN, per, Bul Inst Politeh Iasi, Vol II,  
1956, pp 253-272.

AEC NP Tr-876

A Method for Preventing Resonance Discharge  
in a Cavity Resonator by Means of a Magnetostatic  
Field, by A. Massarotti, A. Turrin,  
ITALIAN, per, Laboratori Nazionali di Frascati  
del CNEN, Nota Interna No. 59, 25 Nov 1960.

AERE, Harwell Tr-890

High Linear Polymers of Preferred Alphaolefin  
Structure and Process for the Preparation  
Thereof, 22 pp.  
ITALIAN, Patent No 526,101.

Sci Lib  
Patent Office

Introduction to Automatic Control, by  
Keisuke Izawa.  
JAPANESE, bk.

\*Elsevier Pub. Co.

Scientific  
Engineering (Contd)

Hull Forms of High Speed Boats (Pt. 3),  
Hydrofoil, 10 pp.  
JAPANESE, Encl 2 to 535-62 to USNA, Tokyo,  
1 Jul 1961.

Dept of Navy  
ONI 5148998

Considerations on Brittle Fracture in Design  
of Welded Structures, by Y. Akita.  
JAPANESE, per, Journal of Soc Mech Engrs,  
Vol LXIII, No 503, Dec 1960, pp 1632-1640.

\*U.K. Atomic Energy  
Authority Risley,  
TRG Inf Ser 88(R)

Studies on the Friction Mechanism of Fibre  
Systems, by S. Kinoshita, T. Takizawa.  
JAPANESE, per, Journal of the Society of  
Textile and Cellulose Industries, Vol XV,  
No 6, 1959, pp 455-460.

CSIRO

On Draft Force I. A Draft Force Measuring  
Machine and the General Nature of Low Draft  
Forces, by S. Ishikawa, J. Shimizu.  
JAPANESE, per, Journal of the Society of  
Textile and Cellulose Industries, Vol XV,  
No 6, 1959, pp 461-465.

CSIRO 4627

Operating Characteristics of the Inclined-  
Pipe Type Extractor on Uranium Extraction, by  
T. Kurihara, H. Kimura, et al.  
JAPANESE, per, Nihon Genshiryoku Gakkaishi,  
Vol IV, No 1, 1962, pp 37-44.

\*AERE, Harwell Tr-1646

Comment on the Automation of a Fuel Oil  
Purifying System, Based on the Results of  
the Automated Purifying System Adopted on  
the Kinkazan Maru and the Tokachisan Maru,  
by Yoshinori Oka, 13 pp.  
JAPANESE, per, Science of Ships, Vol XV,  
No 4, 10 Apr 1962; Encl 2 to 400-62 to USNA,  
Tokyo, 10 May 1962.

Dept of Navy  
ONI 5145946

Studies on Scutchers VIII - Lateral  
Unevenness of Scutcher Lap (1), by  
Y. Narumi.  
JAPANESE, per, Textile Machinery Society  
of Japan Journal, Vol II, 1959, pp 40-45.

CSIRO

Scientific  
Engineering (Contd)

Studies on Scutchers IX - Air Flow Between Beater and Cage, by Y. Narumi.

JAPANESE, per, Textile Machinery Society of Japan Journal, Vol III, 1959, pp 40-43.

CSIRO

Mechanisms and Aerodynamic Action of a Pneumatic Analyer, by S. Yamawaki, G. Hirose, JAPANESE, per, Textile Machinery Society of Japan Journal, Vol V, 1959, pp 15-23.

CSIRO

Oils for Steel Strip Rolling, by K. Saeki. JAPANESE, per, Yukagaku, Vol X, No 2, 1961, pp 83-88.

BISI 2657

Small Dimensional Pulp Wood, Some Thoughts on Its Utilization and Transport by Floating, by E. W. Ronje. NORWEGIAN, per, Norsk Skogindustri, Vol III, No 4, 1949, pp 87-95.

CSIRO

Some Applications of Decoding Systems of the Complementary Type Using Directional Elements, by J. Bromirski.

POLISH, per, Archiwum Automatyki i Telemechaniki, Vol VI, No 4, 1961, pp 399-403.

\*FTD-TT-62-1007

New Attachment to Telescope of a Theodolite for Sighting on the Center of the Sun's Image, by Waclaw Gradski.

POLISH, per, Przeglad Geodezyjny, No 8, 1960, pp 281-285.

\*FTD-TT-62-1090

Measurement and Computation of Vibration Stresses in Aircraft Turbine Blades, Part I., by Zdzislaw Lapinski.

POLISH, per, Technika Lotnicza, No 1/2, 1961, pp 16-18.

\*FTD-TT-62-1009

Track-Laying Vehicle.

SWEDISH, per, Militar Teknisk Tidskrift, No 1, 1962, pp 33-34.

\*ACSI I-1-17

ID 2201423

Scientific  
Fuels

Conditions for Stable Burning of Single  
Drops of Liquid Fuel, by F. A. Agafonova,  
M. A. Gurevich, Ye. F. Tarasova.

RUSSIAN, bk, v sb Tret'ye Vsessoyuznoye  
Soveshchaniya po Teorii Gorenija, Vol II,  
1960, pp 29-39.

\*FTD-TT-02-934

The Ignition of Atomized Fuels, by Yu. B.  
Shiridov, Ye. V. Shatrov.

RUSSIAN, bk, sb. Tret'ye Vsessoyuznoye  
Soveshchaniye po Teorii Gorenija, Vol II,  
1960, pp 65-75.

\*FTD-TT-02-934

Errors in the Control of the Gas Flow (in a  
Blast Furnace), by N. N. Chernov.

RUSSIAN, per, Metallurg, Vol VI, No 2,  
1961, pp 4-6.

MT 182

Utilization of Commercial Gases As Explosives,  
0 pp.

FRENCH, rpt, Mar 1962, OUSARMA, France, Encl  
to R-233-02.

ID 2198782

Special Fuels Derived From Coal, by M. Letort,  
61 pp.

FRENCH, rpt, Les Carburants Speciaux Derives  
de la Houille, Centre D'etudes et Recherches  
Des Charbonnages de France, 45 pp. 9077352

FTD-TT-02-230

Fission Gases in Nuclear Fuels, by R. Darras,  
J. L. Berry.

FRENCH, per, Industries Atomiques, Vol V,  
No 3/4, 1961, pp 83-93.

\*U.K. Atomic Energy  
Authority Risley,  
TRG Inf Ser 102(C)

Petrographical Study of Japanese Coals by  
Microscopic Method With  $\text{CH}_2\text{KI}_2$  as Immersion  
Fluid, by E. Stach, R. Takahashi.

JAPANESE, per, Fuel Society of Japan Journal,  
Vol XXXVII, No 374, 1959, pp 351-350.

CSIRO

Scientific  
Geophysics

Principles of Geotectonics, by V. V. Belousov.  
RUSSIAN, bk, 700 pp.

McGraw-Hill Book Co.

A New Method of Solving Geodetic Problems on an Ellipsoid, by V. G. Gan'shin.  
RUSSIAN, bk, Ak Nauk SSSR, Sbornik Statey Laboratori Aerometrodov, 1953, pp 119-132.

ACIC

Selected Articles From the Russian Book  
Informatsionno-Tekhnicheskiy Sbornik, Fotogramm-tsentr Voyenno-Topograficheskoy Sluzby RKKA,  
No 1, 1940.

ACIC

The Problem of Executing an Overall Adjustment of the State Fundamental (Basic) Geodetic Net in the USSR, (pp 5-9).

Basic Statutes for Establishment of the State Geodetic Control Net in the USSR, (pp 10-15).

The Adjustment of Triangulation Nets by the Method of Successive Interpolation of Separate Points, by I. M. Gerasimov, (pp 16-28).

Meteorological Instruments and Observations in the USSR, by M. S. Sternzat, A. A. Sapozhnikov, 113 pp.  
RUSSIAN, bk, Meteorologicheskiye Pribory Nablyudeniya i Ikh Obrabotka, 1959, pp 124-168, 283-310.

JPRS 14307

Calculation of the Isostatic Reduction of Gravity for Gravimetric Points of the Crimea and the Black Sea, by S. S. Tovchigrechko.  
RUSSIAN, bk, Sbornik No 7, Issledovaniya po Gravimetrii, Tsentral'nyy Nauchno-Issledovatel'skiy Institut Geodezii, Aero i Kart, Vol VII, 1941, pp 81-86.

ACIC

Scientific  
Geophysics (Contd)

Selected Articles From the Russian Book  
Sbornik Nauchno-Tekhnicheskikh i  
Proizvodstvennykh Statey po Geod, Kart,  
Topograf, Aero i Grav.

ACIC

Vol XXI, 1948, pp 58-76.  
Solution of Conditional Equations by  
Approximations Without Compiling Normal  
Equations by Means of Correlates, by  
G. M. Kir'yakov.

Vol XXIII, 1949.  
New Formulae and Order of Computing Reductions  
in the Projections of a Second-Order Triangula-  
tion on a Plane, by D. A. Larin, (pp 21-28).

Leveling Tie of the Kronstadt Gauge Datum  
With the Continent, by D. S. Sherman, A. I.  
Bulanov, (pp 61-68).

Time Determination in the North, by A. P.  
Kolupayev, (pp 68-79).

Transactions of the 14th Astrometrical Conference  
of the USSR, Held in Kiev 27-30 May 1958, editor  
M. S. Everev.  
RUSSIAN, bk, Trudy 14th Astrometricheskoy  
Konferentsii SSSR, Kiev, 27-30 May 1958, 1960,  
440 pp.

\*FTD-TT-62-959

On Determining Distribution Laws on the Basis of  
a Small Number of Observations, by V. V.  
Chavchanidze, V. A. Kumisishvili.  
RUSSIAN, bk, Trudy Soveshchaniya, Provedennogo  
v Oktyabre 1959, Nauchno-Tekhnicheskoye  
Obshchestvo Priborostroitel'noy Promyshlennosti,  
"Primeneniye Vychislitel'noy Tekhniki Dlya  
Avtomatizatsii Proizvodstva", 1961, pp 129-139.

\*FTD-TT-62-1048

Hydrography of Kaydak Bay, by V. V. Borisov.  
RUSSIAN, per, Ak Nauk SSSR, Komissiya po  
Kompleksnomu Izucheniyu Kaspiyskogo Morya i  
Sovet po Izucheniyu Proizvoditel'nykh Sil,  
Vol I, Part 1, 1937, pp 13-36.

ACIC

Scientific  
Geophysics (Contd)

Topographic-Geodetic and Cartographic Studies  
of Uzbekistan, by V. P. Shcheglov.  
RUSSIAN, per, Ak Nauk SSSR, Sovet po Izucheniyu  
Proizvoditel'nykh Sil, Vol IV, 1934, pp 95-103.

ACIC

The Geodetic Party in the Pamir, by D.  
Zhongolovich.  
RUSSIAN, per, Ak Nauk SSSR, Tadzhikskaya  
Kompleksnaya Ekspeditsiya 1932, Vol I,  
1932, pp 367-375.

ACIC

Gravimetric Work in the Pamir, by B. L.  
Ochapovskiy.  
RUSSIAN, per, Ak Nauk SSSR, Tadzhikskaya  
Kompleksnaya Ekspeditsiya 1932, Vol I, 1932,  
pp 384-389.

ACIC

Concentration of BE<sup>7</sup> in the Surface Layer of  
the Atmosphere and in Atmospheric Precipitation,  
by V. P. Shvedov, Z. G. Gritchenko, L. I.  
Gedeonov, 6 pp.  
RUSSIAN, per, Atom Energ, Vol XII, No 1, 1962,  
pp 64-66. 9677366

FTD-TT-62-416

Results of the Gravitational Observations in  
the Groznyy Region in 1928, by B. Numerov.  
RUSSIAN, per, Byull Astron Inst, No 23, 1929,  
pp 21-25.

ACIC

Determinations of Gravity Along the Severnaya  
Dvina River and Its Tributaries in 1928, by  
A. Gzhitskiy.  
RUSSIAN, per, Byull Astron Inst, No 23, 1929,  
pp 25-26.

ACIC

**Scientific  
Geophysics (Contd)**

**Selected Articles From the Russian Periodical  
Iz Ak Nauk SSSR, Ser Geofiz.**

**ACIC**

No 4, 1955, pp 369-376.

Device for Computation of the Poisson  
Integral and Some of Its Applications, by  
S. P. Kapitsa.

No 2, 1956, pp 218-225.

Interpretation of Magnetic and Gravity  
Anomalies by the Method of Exclusion of  
the Elementary Fields, by D. S. Midov.

No 6, 1956.

On the Computation of the Value of Za by  
Measured Values of T, by T. N. Simonenko,  
(pp 704-707).

On the Method of Characteristic Points, by  
A. N. Timofeyev, (pp 712-721).

No 8, 1956, pp 997, 998.

On Variations of the Magnetic Field During  
Production in Regional Aeromagnetic Preci-  
sion Surveys, by I. M. Pudovkin.

No 10, 1956, pp 1236-1238.

Defense of Dissertations at the Academic  
Council of the Institute for Earth Physics  
of the Academy of Sciences of the USSR in  
1956.

Scientific  
Geophysics (Contd)

Selected Articles From the Russian Periodical  
Iz Imperatorskago Russkago Geograf Obshch.

ACIC

Vol XII, No 1/3, 1876.  
Second Report on Results of Astronomic,  
Magnetic, and Meteorological Observations  
Made at the Time of the Olenek Expedition,  
by F. F. Miller, (pp 31-36).

List of Elevations Derived by Siberian  
Leveling in the Section Between Kansk  
and Irkutsk, by F. F. Miller, (pp 37-41).

Siberian Leveling, (pp 315-321).

Vol XXXII, No 1, 1896, pp 367-370.  
On the Figure of the Geoid in the Ferganskaya  
Oblast', by I. I. Pomerantsev.

Vol XXXII, No 6, 1898, pp 510-524.  
The Investigation of Local Anomalies of  
Gravity and Terrestrial Magnetism, by  
F. A. Sludskiy.

Vol XXXIX, No 4, 1903, pp 295-304.  
Relative Determinations of Gravity in  
the Urals and Along the Volga Made by the  
Astronomical Observatory of Kazan' University  
in 1899, 1900, and 1902, by D. I. Dubyago.

Vol XXXIX, No 5, 1903, pp 508-542.  
Report of the Commission of the Imperial  
Russian Geographical Society for the  
Investigation of Gravity in Russia, by  
Sergiyevskiy.

Vol XLIV, No 1/2, 1908, pp 55-61.  
Final Results of the Determination of  
Gravity in the Urals and Along the Volga,  
Carried Out by the Kazan University  
Astronomical Observatory in 1899, 1900,  
1902, and 1903, by D. I. Dubyago.

Scientific  
Geophysics (Contd)

Selected Articles From the Russian Periodical  
Iz Imperatorskago Russkago Geograf Obshch. (Contd) ACIC

Vol XLIV, No 6, 1908, pp 317-321.  
Gravity Determinations Along the Volga in 1907,  
by V. Baranov.

Vol L, No 7, 1914, pp 429-433.  
Preliminary Report on the Astronomical Work  
Performed in 1913 by the Olonets Expedition  
of the Imperial Russian Geographic Society,  
by Ya. I. Belyayev.

Vol LI, No 3, 1915, pp 139-148.  
A Short Report on the Gravity Observations Made  
by the Kazan' Astronomic Observatory With the  
Assistance of the Imperial Russian Geographical  
Society in 1911-1913, by V. Baranov.

Vol LIV, No 1, 1918, pp 3-14.  
Present-Day Astronomic and Geodetic Operations  
in European Russia, by I. I. Pomerantsev.

List of Points in Kars Oblast Determined  
Barometrically in 1881, by P. F. Stepanov.  
RUSSIAN, per, Iz Kavkaz Otdel Imperatorskago  
Russkago Geograf Obshch, Vol VII, 1882-1883,  
pp 167-188. ACIC

Observations Made by Professor Fr. Parrot on  
Oscillation of the Constant Pendulum at Dorpat,  
Tiflis, and on the Slope of Great Ararat  
Mountain (In the Monastery of St. Jacob) in  
1829, and 1833, by Parrot.  
RUSSIAN, per, Iz Kavkaz Otdel Imperatorskago  
Russkago Geograf Obshch, Vol VII, 1882-1883,  
pp 233-244. ACIC

The Rotation of a Polarization Plane in the  
Surface Layer of the Atmosphere, by F. P  
Noskov, 4 pp.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Geod i  
Aerofotos, No 2, 1961, pp 65-68. 9677416 FTD-TT-62-478

Scientific  
Geophysics (Contd)

- The Complex Method of Forecasts, by N. A. Bagrov, 11 pp.  
RUSSIAN, per, Meteorologiya i Gidrologiya, No 4, 1962, pp 14-21. JPRS 14310
- Publications of Scientific Research Institutions of the Hydrometeorological Service in 1961, 10 pp.  
RUSSIAN, per, Meteorologiya i Gidrologiya, No 4, 1962, pp 66-70. JPRS 14310
- The Siberian Smoke Haze of 1959, by A. V. Borisov, 3 pp.  
RUSSIAN, per, Priroda, No 5, 1961, pp 65, 66. JPRS 14250
- The Elevations of Photogrammetric Traverses, by F. V. Drobyshev.  
RUSSIAN, per, Trudy Gosudar Nauchno-Issled Inst Geod i Kart, Vol IV, 1931, pp 187-198. ACIC
- Plan for Scientific Research Aerial Survey Operations in 1929/30, 1932/1933, Carried Out by the Leningrad Division of the State Scientific Research Institute of Geodesy and Cartography, by N. A. Rynin.  
RUSSIAN, per, Trudy Gosudar Nauchno-Issled Inst Geod i Kart, Vol IV, 1931, pp 272-286. ACIC
- Organic Matter in Sea Water, by B. A. Skopintsev.  
RUSSIAN, per, Trudy Morskogo Gidrofiz Inst Ak Nauk SSSR, Vol XIX, 1960, pp 3-20. NLL RTS 2006
- The Improvement of the Programs for Measurements of Horizontal Angles in the Chains and Nets of the State Triangulation, by I. M. Konopal'tsev.  
RUSSIAN, per, Trudy Moskov Inst Inzhenerov Geodez, Aero i Kart, Vol XX, 1955, pp 23-34. ACIC
- Tables for the Non-Logarithmic Calculation of Geodetic Coordinates by Sides of First Order Triangulation, by B. Osinskiy.  
RUSSIAN, per, Trudy Moskov Inst Inzhenerov Geodez, Aero i Kart, Vol XXX, 1958, pp 5-11. ACIC

Scientific  
Geophysics (Contd)

Erosion of Aggradational Forms in the Bering Sea, by A. S. Yonin, 34 pp.  
RUSSIAN, per, Trudy Okeanograficheskoy Komissii,  
Ak Nauk SSSR, Vol VIII, 1961.

MEB

Sand Transport by the Tyemryuk Current (Kerch Strait), by V. L. Boldyryev, Ye. N. Neveskiy, 41 pp.  
RUSSIAN, per, Trudy Okeanograficheskoy Komissii,  
Ak Nauk SSSR, Vol VIII, 1961.

MEB

The Karakum (Desert) Geographic Expedition of 1930, by S. Yu. Geller.  
RUSSIAN, per, Trudy Soveta po Izucheniyu Prirodnykh Resurov, Ser Turkmen, Sbornik IV, Ak Nauk SSSR, Vol VIII, 1934, pp 5-7.

ACIC

Astronomical Observations of the East Unguz Party, by S. M. Vorob'yev.  
RUSSIAN, per, Trudy Soveta po Izucheniyu Prirodnykh Resurov, Ser Turkmen, Sbornik IV,  
Ak Nauk SSSR, Vol VIII, 1934, pp 9-23.

ACIC

Astronomical Work of the West Unguz Party, by Ya. Ya. Gakkel'.  
RUSSIAN, per, Trudy Soveta po Izucheniyu Prirodnykh Resurov, Ser Turkmen, Sbornik IV,  
Ak Nauk SSSR, Vol VIII, 1934, pp 25-30.

ACIC

Gravimetric Survey of the Kuzbas and Gornaya Shoriya in 1931, by P. M. Gorshkov.  
RUSSIAN, per, Trudy Soveta po Izucheniyu Proizvoditel'nykh Sil, Ser Kuzbasskaya, Ak Nauk SSSR, Vol I, 1932, pp 1-28.

ACIC

Perspectives of the Development of the Astrogeodetic Network in the USSR, by S. G. Sudakov, 17 pp.  
RUSSIAN, per, Trudy Tretyego S"yezda Vsesoyuznogo Astronomo-Geodezicheskogo Obshchestva, 1962,

JPRS 14340

Scientific  
Geophysics (Contd)

Present State of Geodesy and Tasks Ahead,  
by A. A. Izotov, 17 pp.

RUSSIAN, per, Trudy Tret'yego S"yezda  
Vsesoyuznogo Astronomo-Geodezicheskogo  
Obshchestva, 1962, pp 67-72.

JPRS 14340

Divergence and Curl of Wind Velocity and the  
Laplacian H at Heights in Quasi-Vertical  
Cyclones, and Atm-Cyclones, by A. N.  
Mertsalov, 18 pp.

RUSSIAN, per, Trudy Tsentral' Inst Prognozov,  
No 112, 1961, pp 18-31.

JPRS 14255

Results of Testing Methods of Forecasting  
the Absolute Geopotential of the Isobaric  
Surfaces of 500 and 300 Millibars, by  
T. D. Sereda, 8 pp.

RUSSIAN, per, Trudy Tsentral' Inst Prognozov,  
No 112, 1961, pp 40-45.

JPRS 14255

Geodetic-Gravimetric Work Carried Out by  
TsNIIGAiK, by I. A. Kazansky.

RUSSIAN, per, Trudy, Tsentral'nogo Nauch  
Issled Inst Geod, Aero i Kart, Vol II,  
1936, pp 2-7.

ACIC

Methods of Gravimetric Determination of the  
Deflections of the Vertical, by M. S. Zverev,  
N. V. Kiselev.

RUSSIAN, per, Trudy Tsentral'nogo Nauch Issled  
Inst Geod, Aero i Kart, Vol II, 1936, pp 59-72.

ACIC

Adjustment Methods of the First Order  
Triangulation, by N. A. Urmayev.

RUSSIAN, per, Trudy Tsentral'nogo Nauchno-  
Issled Inst Geod, Aero i Kart, Vol XIX,  
1937, pp 5-34.

ACIC

**Scientific  
Geophysics (Contd)**

Selected Articles From the Russian Periodical  
Trudy Tsentral'nogo Nauchno-Issledovatel'skogo  
Inst Geodezii, Aerofotogrammetrii i Kartografii,  
No 139, 1960.

JPRS 14455

Requirement For Gravimetric Surveying  
Connected With Processing Astronomical-Geodetic  
and Levelling Networks, by L. P. Pellinen,  
23 pp, (pp 3-20).

Investigation of the Accuracy of the Formulas  
of Stokes and Vening Meinesz, by I. M.  
Tiron, 29 pp, (pp 21-44).

On the Present State of Theory of Studying  
the Shape of the Earth's Physical Surface,  
by M. I. Yurkina, N. P. Makarov, et al,  
21 pp, (pp 45-59).

On Errors in the Interpolation of Gravity  
Anomalies and On the Accuracy of Gravimetric  
Deflections of Plumb Lines, by L. A. Govorova,  
7 pp, (pp 77-81).

Errors in Calculation of Plumb Line Deflections  
in a Uniform Gravimetric Survey, by L. P.  
Pellinen, 5 pp, (pp 83-87).

Method of Accurate Determination of the  
Oscillation Periods of Pendulums, by  
Yu. A. Slivin, M. Ye. Kheyfets, 16 pp,  
(pp 89-101).

Apparatus of the Central Scientific  
Research Institute of Geodesy, Aerial  
Surveying and Cartography for Measurement of  
Inclinations and Accelerations of a  
Pendulum Instrument During Marine Measurements  
of the Force of Gravity, by M. Ye. Kheyfets,  
25 pp, (pp 103-120).

Scientific  
Geophysics (Contd)

Selected Articles From the Russian Periodical  
Trudy Tsentral'nogo Nauchno-Issledovatel'skogo  
Inst Geodezii, Aerofotogrammetrii i Kartografii,  
No 139, 1960. (Contd)

JPRS 14455

Expeditionary Quartz Chronometer of  
the TsNIIGAiK Gravimetric Laboratory, by  
L. A. Gerenburg, Yu. A. Slivin, et al,  
19 pp, (pp 121-124).

On the Use of a Spring Suspension for  
Gravimetric Pendulums, by M. Ye. Kheyfets,  
15 pp, (pp 135-145).

Selected Articles From the Russian Periodical  
Vest Mosk Univ, Ser V, Geograf, No 2, 1961.

JPRS 14463

Cartometric Study of Landscapes, by V. A.  
Nikolayev, Chan Mu-Tung, 11 pp, (pp 3-9).

Maps of Inland Waters in National Atlases,  
by T. G. Svatkova, 13 pp, (pp 27-33).

Conference on the Problems of Geobotanical  
Mapping, by A. G. Voronov, 5 pp, (pp 72-73).

V. N. Tatishchev as a Geographer, by  
N. G. Skachenko, 5 pp, (pp 74, 75).

The Initial Processing of Triangulation Data,  
by V. V. Smykov.  
RUSSIAN, per, Zapiski po Gidrografii, Vol II,  
1941/43, pp 53-71.

ACIC

Topographic Survey of Lake Balkhash, by  
Babkov.  
RUSSIAN, per, Zapiski, Imperatorskogo  
Russkago Geograf Obshch po Obshchey Geograf,  
Vol I, 1867, pp 329-347.

ACIC

Topographic Survey of Ala-Kul, by A. Golubev,  
RUSSIAN, per, Zapiski, Imperatorskogo Russkago  
Geograf Obshch po Obshchey Geograf, Vol I,  
1867, pp 349-351.

ACIC

Scientific  
Geophysics (Contd)

Results of the Siberian Leveling Done in 1875  
to 1876 From the Village of Zverinogolovskaya to  
Lake Baykal, by V. Fust.

RUSSIAN, per, Zapiski Imperatorskago Russkago  
Geograf Obshch po Obshchey Geograf, Vol XV,  
No 1, 1885, pp 1-44.

ACIC

Report on the Activities of the Military  
Topographic Division of the Orenburg Military  
District in 1868, by A. A. Tillo.

RUSSIAN, per, Zapiski Orenburgskago Otdel Imperator-  
skago Russkago Geograf Obshch, Vol I, 1870,  
pp 259-269.

ACIC

Account of the Field Work Carried Out by  
Members of the Orenburg Military Topographic  
Division in 1871-1873 With a List of Tri-  
angulation Points of the Orenburg Cossacks  
Region, by M. Lebedev.

RUSSIAN, per, Zapiski Orenburgskago Otdela  
Imperatorskago Russkago Geograf Obshch,  
Vol III, 1875, pp 424-448.

ACIC

The 6300 Radiation of the Nocturnal  
Atmospheric Luminescence, by D. Barbier.

FRENCH, per, Annales de Geophysique,  
Vol XV, No 2, 1959, pp 179-216.

CSIRO 4737

The Emission of the Red Line in the Night Sky  
Over Africa, by D. Barbier, G. Weill, J. Glaume,  
27 pp.

FRENCH, per, Annales de Geophysique, Vol XVII,  
No 3, 1961, pp 305-318.

Navy Tr 3185/NRL 888

Measurements of Concentrations and Velocity  
in a Current of Water and Air Mixed, by  
G. Halbronn.

FRENCH, per, La Houille Blanche, 1951,  
pp 394-405.

Univ of Melbourne  
T.159

Scientific  
Geophysics (Contd)

Investigation of Sand Migration in the Region  
of the German Coast by Means of Radioactive  
Tracers, by H. Schulz, G. Strohl.  
GERMAN, per, Deutsche Gewasserkundliche  
Mitteilungen, Vol IV, No 1, 1960, pp 17-27.

\*AERE, Harwell Tr-1653

Theory of Illumination of a Horizontal Surface  
by Daylight, by H. Berlage.  
GERMAN, per, Meteorologische Z., Vol XLV, No 5,  
1928, pp 174-180.

CSIRO 4587

The Precipitation of Dust by the Wet Process  
Using Venturi Tubes, by W. Muhlrad, 6 pp.  
GERMAN, per, Staub, No 30, 1952, pp 221-224.

CSIR Tr No 209

Contributions to the Theory of Errors of the  
Reduction of Gravity at Leveling Points, by  
Karl Ramsayer.  
GERMAN, per, Zeitschrift fur Vermessungswesen,  
No 1, 1954.

ACIC

Scientific  
Mathematics

Interpolation and Extrapolation of Stationary Random Sequences, by A. N. Kolmogorov, 14 pp.  
RUSSIAN, paper, 9099915

Rand Corporation  
RM-3090-PR

Information and Information Stability of Random Magnitudes and Processes, by Mark Semenovich Pinsker, 201 pp.  
RUSSIAN, bk, Informatsiya i Informatsionnaya Ustoichivost' Sluchaynykh Vlchin i Protsessov,  
Moscow, Izd, vo AN SSSR, 1960.

\*FTD-TT-62-956

The Use of Analytical Computers for Multiplying Trigonometric Series, by D. K. Kulikov.  
RUSSIAN, per, Byull Inst Teoret Astron, Ak Nauk SSSR, Vol IV, No 6 (59), 1949, pp 283-286.

ACIC

Invariants and Classification of Quadratic Differential Forms in Four Variables, by P. I. Petrov.  
RUSSIAN, per, Iz Ak Nauk SSSR, Ser Matemat, Vol XXIII, 1959, pp 387-420.

NLL RTS 1981

On Circular Motions of Connected Pendula.  
II. by V. S. Serebryakova, Ye. A. Barashin.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved Matemat, No 4, 1961, pp 112-118.

\*FTD-TT-62-1089

Topological Classification of the Neighborhoods of a Singular Point in n-Dimensional Space, by D. M. Grobman.  
RUSSIAN, per, Matemat Sbornik, Vol LVI, No 1, 1962, pp 77-93.

\*Navy/APL

Mathematics - A Powerful Tool For Knowledge,  
by O. Parasyuk, Yu. Trokhimchuk, 5 pp.  
RUSSIAN, per, Nauka i Zhittyia, No 2, 1962,  
pp 12, 13.

JPRS 14331

Lectures on Functional Equations and Their Applications, by J. Aczel.  
GERMAN, bk, 350 pp.

\* API

Mathematical Bases of Switchyard Efficiency and Their Application, by Walter Rosteck, 23 pp.  
GERMAN, per, Die Bundesbahn, Oct 1961, pp 893-904.

ACSI I-1461  
ID 2198541

Scientific  
Medicine

Antibiotic-Producing Microscopic Fungi,  
by V. I. Bilay.  
RUSSIAN, bk, 200 pp.

\*Elsevier Pub. Co.

Ionizing Radiation and Digestion, by  
I. T. Kurtsin.  
RUSSIAN, bk, 300 pp.

\*Elsevier Pub. Co.

Effects of Ionizing Radiation on the  
Nervous System, by A. V. Lebedinskiy,  
Z. N. Nakhil'nitskaya.  
RUSSIAN, bk, 220 pp.

\*Elsevier Pub. Co.

Atlas on the Pathological Anatomy and  
Pathohistology of Acute Radiation Injury  
in Experiment, by L. V. Funstein.  
RUSSIAN, bk, Atlas po Patologicheskoi  
Anatomii i Patohistologii Ostroi  
Luchevoi Bolezni, 1961, 217 pp.

\*AEC

Hygienic Problems of Acclimatization of  
the Population in the Far North, by  
I. A. Arnol'di, A. Z. Belousova, 94 pp.  
RUSSIAN, bk, Gigiyenicheskiye Voprosy  
Akklimatizatsii Maseleiniya na Kraynem  
Severe, 1961, pp 7-22, 50-61, 91-100,  
112-130, 134-141, 232-244.

JPRS 14225

Aviation Psychology, by K. K. Platonov.  
RUSSIAN, bk, Psikhologiya Letnogo Truda,  
Chapter XI, 1960, pp 114-221.

\*FTD-TT-62-1067

Prevention Measures for Radiation  
Safety, by N. Yu. Tarasenko,  
I. G. Prostakova, N. N. Rynkova, 35 pp.  
RUSSIAN, bk, Work Hygiene in Working in  
Atomic Electrical Stations, 1960,  
pp 58-103.

JPRS 14449

Scientific  
Medicine (Contd)

Selected Articles From the Russian  
Periodical Apteknoye Delo.

Vol X, No 3, May/Jun 1961. JPRS 14293

The First Two Years of the Seven-Year Plan for the Pharmaceutical Economy of the RSFSR, by A. M. Stetsyuk, 14 pp, (pp 3-7).

Certain Prospects in Medical Supplies, by Z. M. Mashkevich, 5 pp, (pp 7-9).

Pharmacy at the 41st Anniversary of the Establishment of Soviet Power in Georgia, by G. A. Nishnianidze, I. S. Tabagari, 11 pp, (pp 9-13).

Vol II, No 1, Jan/Feb 1962, pp 11-15. JPRS 14343

The Scientific Activity of the All-Union Scientific Pharmaceutical Society, by Yu. A. Blagovidova, 6 pp.

Vol XI, No 1, Jan/Feb 1962. JPRS 14343

Pharmacy -- Theory and Practice, 10 pp, (pp 3-11).

Development of Pharmacy in the Armenian SSR in the Past Forty Years, by R. S. Parsadanyan, Ts. F. Khachatryan, 4 pp, (pp 15-18).

Material for the History of the Department of Anatomy in the State Central Order of Lenin Institute of Physical Culture, Imeni I. V. Stalin, (1920-1960), by O. N. Aksanova, A. A. Gladysheva, 7 pp. RUSSIAN, per, Arkhiv Anatomii, Gistolog i Embriolog, Vol XLI, No 10, 1960, pp 114-118.

JPRS 14268

The Effect of Pentagynous Hawthorne Upon the Bioelectric Activity of the Cerebral Cortex of Rabbits, by D. Ya. Guseynov, 11 pp. RUSSIAN, per, Azerbaydzhan Medit Zhur, No 3, 1962, pp 16-23.

JPRS 14396

**Scientific  
Medicine (Contd)**

Change in Impedance of the Nervous System of a Frog Under the Effects of Visible Light, by M. V. Kirzon, Yu. V. Mineyev, et al. RUSSIAN, per, Biofizika, Vol VII, No 3, 1962, pp 306-310.

\*FTD-TT-62-1106

Selected Articles From the Russian Periodical Byul Eksper Biol i Medit.

Vol LIII, No 12, 1961, pp 47-50.

9677372

FTD-TT-62-277

Effect of Microwaves on the Hormonal Activity of the Adrenal Cortex, by F. L. Laytes, L. A. Shurikhina, 6 pp.

Vol LIII, No 1, 1962, pp 41-45.

9665794

FTD-TT-62-278

Nonthermal Action of Microwaves on the Rhythm of Cardiac Contractions in Animals. Report 1 Investigation of the Action of Continuous Microwaves, by A. S. Presman, N. A. Levitina, 8 pp.

Vol LIII, No 2, 1962, pp 43-47.

9665785

FTD-TT-62-772

The Effect of Pure Oxygen Inhalation of the Lungs and Heart of White Rats, by I. S. Balakhovskiy, A. R. Mansurov, et al, 8 pp.

No 3, 1962, pp 3-7.

The Biophysics of Nerve Signaling, by P. O. Makarov, A. A. Nevskaya, 6 pp.

JPRS 14382

On the Status and Problems of the Development of Scientific Research on Physiotherapy in the Public Health Establishments of the RSFSR, by A. N. Obrosov, 4 pp. RUSSIAN, per, Byul' Uchenogo Medit Soveta, Vol II, No 5, 1961, pp 16-20.

JPRS 14294

Scientific  
Medicine (Contd)

The Important Question of the Problem  
of Acclimatization of Man in the North,  
by G. A. Orlov, A. P. Tyukina, 4 pp.  
RUSSIAN, per, Byul' Uchenogo Medit Soveta,  
Vol II, No 5, 1961, pp 21-24.

JPRS 14294

The Importance of Fat Reserves of the  
Cell for Its Reactivation Following  
Radiation Injury, by V. M. Alekseyeva,  
6 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXLII,  
No 3, 1962, pp 699-701.

JPRS 14415

Relative Biological Effectiveness (RBE)  
of 660 Mev Protons, by E. B. Kurlyandskaya,  
G. A. Avrunina, et al, 7 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXLII,  
No 3, 1962, pp 702-705.

JPRS 14415

Reduction of the Degree of Injury of  
DNA Molecules Under the Effect of  
Radiation in the Presence of  
Propylgallate, by N. V. Nikolayeva,  
K. Ye. Kruglyakova, et al, 4 pp.  
RUSSIAN, per, Dok Ak Nauk SSSR, Vol CXLII,  
No 3, 1962, pp 713-715.

JPRS 14415

Tetracycline Antibiotics and Restoration  
of Bone Tissue, by P. Malek, et al, 6 pp.  
RUSSIAN, per, Eksper Khirurgiya, Vol II,  
1962, pp 86-91.

Navy Tr 3176/NMS 712

Scientific Congresses and Conferences.  
Reports on Problems of the Physiology  
of Analyzers, by V. D. Glezer,  
Ye. A. Radionova, 6 pp.  
RUSSIAN, per, Fiziolog Zhur SSSR, Vol XLVIII,  
No 1, 1962, pp 108-111.

JPRS 14302

Change in the Bioelectrical Activity of  
Various Brain Regions of Cats and Dogs  
on Exposure to Carbon Dioxide, by  
Yu. N. Ivanov, 20 pp.  
RUSSIAN, per, Fiziolog Zhur SSSR Imeni  
I. M. Sechenova, Vol XLVIII, No 3, 1962,  
pp 279-289. 9665780

FTD-TT-62-773

**Scientific  
Medicine (Contd)**

Selected Articles From the Russian  
Periodical Gig Truda i Professional  
Zabolevaniya, No 4, 1962.

JPRS 14279

Electroencephalographic Studies of  
Vibration Sickness Caused by the  
Effect of Total Body Vibration, by  
P. L. Shpil'berg, 11 pp, (pp 14-21).

Calculation Method for Determining  
Tentative Permissible Concentrations  
of Organic Substances in the Air of  
Work Premises, by A. A. Golubev,  
Ye. I. Lyublina, et al, 9 pp, (pp 26-31).

Experience in the Use of Radioactive  
Sodium for Purposes of Studying Vascular  
Permeability in Certain Forms of  
Occupational Diseases of the Nervous  
System, by M. N. Ryzhkova,  
M. I. Smirnova, et al, 5 pp, (pp 32-35).

The Radiation Factor in the Aspect  
of Hygienic and Biological Studies,  
by A. S. Arkhipov, 9 pp, (pp 56-60).

Physiophysiological Study of a High-  
Frequency Ballistocardiogram of a  
Healthy Person, by Ye. B. Babskiy,  
V. L. Karpman, et al, 24 pp.  
RUSSIAN, per, Kardiologiya, Vol II,  
No 1, 1962, pp 44-52.

JPRS 14454

On the Technique of Dynamic Vector-  
cardiographic Investigation, by  
M. L. Medvedev, 12 pp.  
RUSSIAN, per, Kardiologiya, Vol II,  
No 1, 1962, pp 89-92.

JPRS 14454

The Clinical Aspects of Sport Medicine  
in the USSR, by S. P. Letunov, 11 pp.  
RUSSIAN, per, Klin Med, Vol XL, No 1,  
1962.

JPRS 14230

Scientific  
Medicine (Contd)

Discussion of the Reports, 4 pp.  
RUSSIAN, np, Med Rabot, 6 Feb 1962. JPRS 14450

On Integrity and Adherence to  
Principle, by A. Lebedev, V. Chigray,  
7 pp.  
RUSSIAN, np, Med Rabot, 6 Feb 1962. JPRS 14450

Selected Articles From the Russian  
Periodical Medit Radiol, Vol VII,  
No 4, 1962. JPRS 14299

Clinical-Morphological Comparisons  
in the Surgical Method of Treating  
Radiation Injury, by Ye. D. Savchenko,  
10 pp, (pp 47-53).

Clinical Studies of Protein and  
Protein Fractions of Plasma of  
People Who Have Been in Prolonged  
Contact With Ionizing Radiation,  
by O. I. Kudryashova, 5 pp, (pp 54-57).

The Biological Interaction of X-  
and Infrared Rays, by G. A. Mallabiu,  
4 pp, (pp 64-66).

Functional Changes in the Suprarenal  
Medulla After the Effect of Internal  
Irradiation on the Body, by  
V. I. Kandrör, 7 pp, (pp 71-75).

Planning Specifications of Premises  
for Medical Linear Accelerators, by  
S. L. Kanevskiy, 7 pp, (pp 85-89).

On the Content of C-Reactive Protein in  
the Blood of Children Affected by  
Rheumatism, by A. M. Smirnova,  
Zh. Zh. Rapoport, 6 pp.  
RUSSIAN, per, Sovet Medit, Vol XXV, No 4,  
1962, pp 53-56. JPRS 14251

Scientific  
Medicine (Contd)

Ultrasound Treatment of Patient Suffering From Chronic Urticaria, by Ya. V. Pankova, 4 pp.  
RUSSIAN, per, Sovet Medit, Vol XXV, No 4, 1962, pp 126-128.

JPRS 14251

The Mortality Rate in Vorontsovskiy Rayon During the Period 1950-1958, by I. G. Zvazin, 4 pp.  
RUSSIAN, per, Sovet Zdravookhraneniye, Vol XXI, No 3, 1962.

JPRS 14235

Some Results of a Thorough Study of the Morbidity of the Adult Population of Makeyevka, by M. G. Garina, 8 pp.  
RUSSIAN, per, Sovet Zdravookhraneniye, Vol XXI, No 3, 1962, pp 34-39.

JPRS 14235

Selected Articles From the Russian Periodical Teoriya i Prakt Fiz Kul'tury.

Vol XXIV, No 1, 1961, pp 26-32.  
The Use of Static and Strength Exercises on Rings for Physical Training of Gymnasts, by A. A. Korobova, A. B. Plotkin, 11 pp.

JPRS 14278

Vol XXIV, No 4, 1961.  
Portable Remote Control Apparatus for the Motor-Reflex Method, by A. B. Ashmarin, L. D. Kudryavtsev, 8 pp, (pp 291-295).

JPRS 14218

Tremography as a Method of Evaluating the Functional Condition of the Athlete's Nervous System, by V. A. Safonov, 4 pp, (pp 295-297).

**Scientific  
Medicine (Contd)**

**Selected Articles From the Russian  
Periodical Teoriya i Prakt Fiz  
Kul'tury. (Contd)**

Vol XXIV, No 9, 1961, pp 701-706.  
Electromyographic Analysis of the  
Stability of the Posture of Rifle-  
men Under Conditions of Training  
and Competition, by S. P. Narikashvili,  
A. S. Meliya, 10 pp.

JPRS 14301

The Study of Healthy People by the  
Method of Ultra-Low Frequency  
Ballistocardiography, by I. L. Nazarov,  
15 pp.  
RUSSIAN, per, Terapev Arkhiv, Vol XXXIV,  
No 4, 1962, pp 36-46.

JPRS 14395

**Selected Articles From the Russian  
Periodical Vest Ak Med Nauk SSSR.**

No 3, 1962, pp 48-58.  
Experimental Substantiation of the  
Application of Central Cholinolytics  
in Practical Medicine, by  
P. P. Denisenko, 30 pp.

JPRS 14443

No 4, 1962.  
Common Principles in the Formation  
of Protective Adaptations of the  
Organism, by P. K. Anokhin,  
(pp 16-26).

\*FTD-TT-62-963

The Importance of the Endocrine  
Factor of Adaptation and Compensa-  
tion in the Genesis of Some  
Pathological Conditions, by  
V. G. Baranov, (pp 38-44).

Discussions of Reports of the  
Scientific Section of the  
General Meeting of the AMS,  
USSR, Dedicated to the Problems  
of Protective Function of the  
Organism, (pp 82-93).

Scientific  
Medicine (Contd)

Selected Articles From the Russian  
Periodical Vest Ak Med Nauk SSSR. (Contd)

No 5, 1962.

\*FTD-TT-62-1097

The Role of the Hypophysis-Adrenal  
System in Immunological and Infec-  
tious Processes, by V. I. Yoffe,  
I. P. Kopytovskaya, (pp 24-28).

Disturbances of Natural Immunity in  
Irradiated Animals; Modes of Its  
Stimulation, by V. L. Troitsky,  
(pp 29-38).

The Effect of Chemotherapeutic Agents  
on the Protective Functions of the  
Organism, by Kh. Kh. Planelyes,  
(pp 47-51).

Stimulation of Protective Functions  
of the Organism by Physical Factors,  
by A. N. Obrosov, F. D. Vasilenko,  
(pp 64-68).

The Role of Processes of Anaerobic  
and Oxidation Phosphorylation in  
Protective Functions of the Organism,  
(pp 93-101).

The Use of Vinyl Chloride for Reconstructing  
Tendon Sheaths, by V. A. Katonin, 5 pp.  
RUSSIAN, per, Vest Khir Imeni I. I. Grekova,  
Vol LXXXVIII, No 3, 1962, pp 73, 74; 78-80.

JPRS 14298

The Reflection of Human Typological  
Characteristics During the Course of  
Creating Work Fitness by the Ergographic  
Method, by L. P. Pavlova, 14 pp.  
RUSSIAN, per, Vest Leningrad U, Ser  
Biol, No 3, 1962, pp 124-133.

JPRS 14219

Training of Roentgenologists, by  
Yu. N. Sokolov, 8 pp.  
RUSSIAN, per, Vest Rentgenol i Radiolog,  
Vol XXXVII, No 1, Jan/Feb 1962, pp 73-77.

JPRS 14269

Scientific  
Medicine (Contd)

Selected Articles From the Russian  
Periodical Voprosy Kurortolog, Fiz  
i Lechebnoy Fiz Kul'tury, Vol XXVII,  
No 1, 1962.

JPRS 14271

Ballistocardiography as a Method  
of Checking the Appropriateness of  
Therapeutic Treatment, by  
I. Ye. Oranskiy, 9 pp, (pp 20-26).

On the Removal of Ions From the  
Organism by Direct Current, by  
B. M. Broderzon, 11 pp, (pp 55-61).

Criticism and Bibliography on the  
Theoretic Principles of Health-  
Resort-Ology, by S. I. Serov, 11 pp,  
(pp 74-79).

Scientific-Practical Conference of  
Physicians of Some Sanatoria of the  
Caucasus and the Crimea, by  
N. P. Glotov, 3 pp, (pp 92, 93).

The Testing Stimulus Method, by  
Ye. N. Sokolov, M. B. Mikhalevskaya,  
11 pp.  
RUSSIAN, per, Voprosy Psikholog, No 1,  
1962, pp 28-36.

JPRS 14378

The Problem of the Mechanism of  
Retrograde and Anterograde Amnesia,  
by F. D. Gorbov, 8 pp.  
RUSSIAN, per, Voprosy Psikholog, No 1,  
1962, pp 37-44.

JPRS 14378

On the Condition and Tasks of Health  
in the Ukrainian SSR in the Light of  
the Decisions of the 22nd Congress of  
the CPSU by P. L. Shupik, 21 pp.  
RUSSIAN, per, Vrach Delo, No 12, 1961,  
pp 3-11.

JPRS 14308

Scientific  
Medicine (Contd)

The Problem of the Hygienic Requirements in Working With Radioactive Luminescent Dyes Which Are Constantly Active, by N. A. Khboynitskaya, B. P. Pugachevskiy, 8 pp.

RUSSIAN, per, Vrach Delo, No 12, 1961, pp 126-129.

JPRS 14308

Psychoneurologic Aid in the Ternopol'ska Oblast, by V. V. Lastovetskiy, 5 pp.

RUSSIAN, per, Vrach Delo, No 12, 1961, pp 130-132.

JPRS 14308

Medicine and Technology, by B. Zubkov, 13 pp.

RUSSIAN, per, Znaniye-Sila, No 1, 1962, pp 14-17.

JPRS 14385

Selected Articles From the Chinese Book  
Ch'ing-chu Chien-kuo Shih-chou-nien  
I-hsueh K'o-hsueh Ch'eng-chiu Lun-wen-chi  
Hsia-chuan, Vol II, 1959.

Achievements in Internal Medicine in Communist China, by Chang Hsiao-ch'ien, 89 pp, (pp 1-26).

JPRS 14300

Research on the Prevention and Treatment of Schistosomiasis, by Mao Shou-pai, 27 pp, (pp 26-36).

JPRS 14360

Prevention and Treatment of Hook-worm Disease, by Wang Cheng-i, Ch'en Yu-Ch'ing, 11 pp, (pp 37-40).

JPRS 14257

Research on the Prevention and Treatment of Filariasis, by Feng Lan-chou, Feng Lan-hsiang, 17 pp, (pp 40-47).

JPRS 14357

Research on the Prevention and Treatment of Malaria, by Ho Ch'i, Sheng Po-liang, Hsuen Ai-tseng, 16 pp, (pp 47-53).

JPRS 14375

Scientific  
Medicine (Contd)

Selected Articles From the Chinese Book  
Ch'ing-chu Chien-kuo Shih-chou-nien  
I-hsueh K'o-hsueh Ch'eng-chiu Lun-wen-chi  
Hsia-chuan, Vol II, 1959. (Contd)

Research on Prevention and Treatment  
of Kala-azar, by Wu Cheng-chien,  
Ho K'ai-tseng, 20 pp, (pp 53-60).

JPRS 14393

Achievements in Research on Preven-  
tion and Treatment of Paragonimiasis,  
by Wang Chi-wu, Ch'ien Mu-Han, 30 pp,  
(pp 60-72).

JPRS 14424

Research on Clonorchiasis Sinensis,  
by Weng Hsin-chih, Chung Hui-lan,  
10 pp, (pp 72-75).

JPRS 14359

Research on Human Tapeworm Infections,  
by Feng Lan-chou, Mao Shou-pai, et al,  
15 pp, (pp 76-81).

JPRS 14425

Research on Prevention and Treatment  
of Typhus Fever, Trombiculiasis and  
Q Fever, 19 pp, (pp 81-88).

JPRS 14433

Research on Influenza, by Chu Chi-ming,  
22 pp, (pp 88-96).

JPRS 14478

Research on Epidemic Encephalitis B,  
by Sung Kan, 26 pp, (pp 96-106).

JPRS 14493

Infectious Hepatitis, by Chia K'e-ming,  
10 pp, (pp 106-110).

JPRS 14457

Clinical Studies in Typhoid and Para-  
typhoid Fever, by Tai Tzu-ying, 20 pp,  
(pp 110-115).

JPRS 14462

Rheumatoid Heart Diseases, by  
Lin Chuan-yang, 27 pp, (pp 117-123).

JPRS 14476

Research on Blood Dynamics in  
Rheumatoid Bicuspid Valve Structures,  
by Fang Ch'i, 32 pp, (pp 123-131).

JPRS 14497

Scientific  
Medicine (Contd)

Selected Articles From the Chinese Book  
Ch'ing-chu Chien-kuo Shih-chou-nien  
I-hsueh K'o-hsueh Ch'eng-chiu Lun-wen-chi  
Hsia-chuan, Vol II, 1959. (Contd)

Clinical Studies of Nephritis, by  
Wang Shu-chien, 18 pp, (pp 138-143). JPRS 14583

Surgical Achievement in Communist  
China, by Huang Chia-ssu, Meng Chi-mou,  
58 pp, (pp 207-237). JPRS 14386

Surgery of the Heart and Great  
Vessels, by Lan Hsi-chun, 17 pp,  
(pp 270-278). JPRS 14541

Surgical Treatment of Pulmonary  
Tuberculosis, by Wu Ying-kai, 14 pp,  
(pp 279-285). JPRS 14540

Clinical Studies of Carcinoma of  
the Esophagus, by Wu Ying-kai, 13 pp,  
(pp 285-291). JPRS 14542

Clinical Studies of Tuberculosis  
of the Genito-Urinary System, by  
Wu Chieh-ping, 15 pp, (pp 291-296). JPRS 14577

Clinical Studies on Tuberculosis of  
the Joints, by Fang Hsien-chih, 27 pp,  
(pp 296-304). JPRS 14578

Research in Physiological Constants  
in Obstetrics, by Sung Hung-chao,  
13 pp, (pp 316-322). JPRS 14304

Examination of Ovarian Function and  
Its Significance, 17 pp, (pp 322-330). JPRS 14305

Analysis of Causes of Stillbirths  
and Neonatal Deaths, by Wang Shu-chen,  
Lu Hsiang-yun, 19 pp, (pp 330-340). JPRS 14341

Scientific  
Medicine (Contd)

Selected Articles From the Chinese Book  
Ch'ing-chu Chien-kuo Shih-chou-nien  
I-hsueh K'o-hsueh Ch'eng-chiu Lun-wen-chi  
Hsia-chuan, Vol II, 1959. (Contd)

Progress in Cesarean Section, by  
Sheng Yun-ku, Sung Hung-chao,  
Yeh Hui-fang, 13 pp, (pp 340-346).

JPRS 14474

Achievements in Fighting Uterine  
Cervical Cancer in China, by  
Yu-ai-feng, Ko Ying-wei, 19 pp,  
(pp 347-357).

JPRS 14531

Research in Chorionepithelioma, by  
Sung Hung-chao, Lien Li-chuan, 10 pp,  
(pp 357-363).

JPRS 14472

Achievements in the Prevention of  
Eclampsia in Shanghai, by  
Wang Shu-chen, Li Hui-fang, 12 pp,  
(pp 367-372).

JPRS 14473

Collection of Theses on Achieve-  
ments in Medical Sciences in  
Commemoration of the Tenth  
National Foundation Day of China,  
395 pp, (pp 555-585, 587-643,  
775-813).

JPRS 14460

Chinese Journal of Surgery, 4 pp.  
CHINESE, per, Chung-hua Wai-k'o  
Tsa-chih, Vol X, No 3, 1962.

JPRS 14545

The Telescopic-Tube Artificial Kidney,  
by Chang Jen-an, Miu T'ing-chien,  
Miu Chung-liang, 13 pp.  
CHINESE, per, Chung-hua Wai-k'o  
Tsa-chih, Vol X, No 3, 1962,  
pp 188-190.

JPRS 14545

The Development of Neuromorphology,  
by Lu Tzu-hui, 11 pp.  
CHINESE, per, K'o-hsueh T'ung-pao,  
No 11, 26 Nov 1961, pp 34-37.

JPRS 14223

Scientific  
Medicine (Contd)

Chemotherapy of Tumors. VII. The  
Synthesis of Para, Meta, and Ortho  
(Bis-(2-Chloroethyl)-Aminomethyl)-  
Phenylalanine, by Jen Yun-Feng, 7 pp.  
CHINESE, per, K'o-hsueh T'ung-pao,  
No 11, 26 Nov 1961, pp 43-46.

JPRS 14223

Exploring the Mystery of the Develop-  
ment of the Embryo, by Ch'eng Li-chia,  
6 pp.  
CHINESE, np, Kuang-ming Jih-pao,  
9 Jun 1962, p 2.

JPRS 14545

Mongolism. First Example of Atomsomic  
Human Aberration, by Jerome Lejeune,  
et al, 9 pp.  
FRENCH, per, Ann Genet, Vol I, 1959,  
pp 41-49.

Navy Tr 3173/NMS 70

Research on the Immunization of Sheep  
Against Staphylococcal Mastitis, by  
J. Pillet, O. Girard, H. Dutheil, 5 pp.  
FRENCH, per, Annales de l'Institut  
Pasteur, Vol XCVI, No 3, 1959, pp 365-368.  
9089539

AEC NP Tr-882

Lyophilized Calf Bone; Preparation and  
Use in Human Surgery, by P. Stagnara,  
A. Lapras, 3 pp.  
FRENCH, per, Atti Della Societe,  
E.R.T., di Orthop & Traumatol, Vol VI,  
No 3, 1961, pp 427-432.

Navy Tr 3168/NMS

Observations on the Mode of Action of  
Killed Vaccines. Solubilized Vaccine  
(Imminigen) Against Swine Fever, by  
L. P. Delphy, E. Hars.  
FRENCH, per, Bulletin Academy Veterinaire  
de France, No 10, 1953, pp 3-10.

CSIRO

Regular Food.  
FRENCH, per, Bulletin Officiel du  
Ministere de la Guerre et du Ministere  
de la France d' Outre-Mer, No 714-3,  
22 Sep 1955, 251 pp.

\*ACSI I-1667  
ID 2203206

Scientific  
Medicine (Contd)

Serpents of Indochina; Tribe of Hydrophiinae, by Martin.

FRENCH, Collection of Institute of Pasteur of Saigon, 1949, pp 67-77.

Navy Tr 3166/BUMED D/N-62-112

Serpents of Indochina; Tribe of Elapinae, by Martin.

FRENCH, Collection of Institute of Pasteur of Saigon, 1949, pp 78-90.

Navy Tr 3166/BUMED D/N-62-112

Fluorescence and Relative Acid-Alcohol-Fastness of Tuberle Bacilli, by J. Degommier.

FRENCH, per, Extrait des Annales de L'Institute Pasteur, Vol XCVI, Jun 1959, pp 723-733.

\*Navy/BUMED D/N-62-113

The Development of Primary Polycythemia Treated by Radioactive Phosphorus. A Study of a Series of 310 Cases, by M. Tubiana, G. Vallee, M. Boiron, 33 pp. FRENCH, per, Nouvelle Rev Franc Hematol, Vol I, 1961, pp 445-449. 9093480

AEC UCRL Tr-778

Experiments With Heteroplastic Bone Transplants, by Francis Valentin, Andre Lapras, 14 pp.

FRENCH, per, Revue de Chirurgie Orthopedique, Vol XLV, No 1, 1959, pp 22-36.

Navy Tr 3194/NMS 715

Contributions to the Study of the Radicular Palsies of the Brachial Plexus, by A. Klumpke, 199 pp. FRENCH, per, Rev de Med, Vol V, 1885, pp 591-790.

Navy Tr 3193/NMS 714

Serpents of the French Fauna, by Jean Guibe, 10 pp.

FRENCH, rpt, Les Serpents de la Fauna de France, pp 1-8.

Navy Tr 3163/BUMED D/N-62-108

Haemaccel Blood Expander, 15 pp. GERMAN, rpt, Behring Works, Marburg-Lahn, Germany, Published Behringwerke Ag., Germany.

Navy Tr 3165/BUMED D/N-62-109

Scientific  
Medicine (Contd)

Mongoloid Idiocy in Mother and Two  
Incestuous Children, by Ernst Hanhart,  
25 pp.  
GERMAN, per, Acta Genetica Medica,  
Vol IX, 1960, pp 112-130.

Navy Tr 3195/NMS 716

The Action of Rutin in Experimental  
Thrombopenic Purpura of the Rat, by  
Siegfried Witte, Kaethe Wilmes, 26 pp.  
GERMAN, per, Acta Haematol, Vol VII,  
1952, pp 89-105. 9093514

AEC Tr-5114

Neurological Phenomenon in Workers  
Subjected To Vibrations, by V. Styblova,  
34 pp.  
GERMAN, per, Archiv fuer Gewerbeopathologie  
und Gewerbehygiene, No 17, 1959,  
pp 485-503. 9665778

FTD-TT-62-536

Convention in Cologne on Dry Freezing:  
Dry Freezing of Food, by  
A. S. Kovacs Hamburg, 6 pp.  
GERMAN, per, Die Ernahrungswirtschaft,  
No 3, 1962, pp 107-111.

ACSI I-1430-B  
ID 2198556

The Mechanism of Gluconeogenesis After  
Oral Administration of Cortisol, by  
H. J. Huebener, 12 pp.  
GERMAN, per, Hoppe-Seyler's Z Physiol  
Chem, Vol CCCXXII, 1960, pp 135-141.

AEC Tr-5090

On the Mechanism of Action of  
Glucocorticoids, by G. Degenhardt,  
H. J. Huebener, I. Alester.  
GERMAN, per, Hoppe-Seyler's Z Physiol  
Chem, 1961, pp 279-284.

AEC Tr-5089

Experimental Contribution to the  
Functional Analysis of Sound Con-  
duction Disorders, by H. Pichler.  
GERMAN, per, Monatsschrift fur  
Ohrnheilkunde und Laryngo-Rhinologie,  
Vol XCIII, No 3, 1959, pp 129-133.

CAL

Scientific  
Medicine (Contd)

Importance of Zinc in Metabolism, by  
B. Vallee, J. Kagi.  
GERMAN, per, Schweizerische Medizinische  
Wochenschrift, Vol LXXXVIII, No 6,  
1958, pp 132-135.

CSIRO 4915

Regional Lymph Node Reaction in  
Therapeutic Radium-Roentgen Irradia-  
tion for Carcinoma of the Cervix,  
by Hans-Guenther Hillemanns, 74 pp.  
GERMAN, per, Z fur Geburtshilfe,  
Vol XIV, No 2, 1957, pp 156-196.

Navy Tr 3177/NMS 713

Symposium on the Effect of Climate  
on Humans in Israel, by Sh. Kats, 5 pp.  
HEBREW, per, Mada, Vol VI, No 4, 1962,  
pp 52, 33.

JPRS 14543

International Medical Relations of  
Hungary, by Oszkar Rostas, 6 pp.  
HUNGARIAN, per, Nepegeszsegugy,  
Vol XLIII, No 3, 1962, pp 65-68.

JPRS 14264

Metal Infibulation and Autoplastic  
Bone Inlays for Fractures of the  
Forearm, by A. Calati, E. Morelli,  
12 pp.  
ITALIAN, per, Archivio di Orthopedia,  
Vol LXXIII, 1960, pp 102-114.

Navy Tr 3196/NMS 717

Changes in the Serum Lactic Dehydrogenase  
in Man Induced by Muscular Work, by  
Luigi Tessari, Luigi Parrini, 5 pp.  
ITALIAN, per, Archivio Scienze Mediche,  
Vol XII, 1961, pp 94-98.

Navy Tr 3172/NMS 708

Clinical Results With Lyophilized  
Bone Homografts, by Guido Bianchi,  
11 pp.  
ITALIAN, per, Atti Della Societe,  
E.R.T., di Orthop & Traumatol, Vol VI,  
1961, pp 421-431.

Navy Tr 3170/NMS 707

Scientific  
Medicine (Contd)

Preliminary Chromatographic Research  
on Haemoglobins of Adult Type and  
Foetal Type in Normal Children and  
Children Affected by Cooley's Disease,  
by Sansone, Cusmano.

ITALIAN, per, Bollettino Soc Italiana  
di Biologia Sperimentale, 1950,  
pp 1343-1345.

CSIRO

Fetal Prognosis in Toxemia of Pregnancy  
and in Chronic Nephritis; With Particular  
Attention to the Problem of Therapeutic  
Abortion, by Puccio Bailo, Paolo Toschi.  
ITALIAN, per, Minerva Ginecologica,  
Vol VIII, 1959, pp 68-79.

Navy Tr 3167/NMS 704

Influenza B Outbreaks in the Ground  
Self Defense Force, by Tadao Sonoguchi,  
Tsuneyasu Ohashi, 5 pp.  
JAPANESE, per, National Defense Medical  
Journal, Vol IX, No 4, 1962; Encl 1 to  
413-62 to USNA, Tokyo, Apr 1962.

Dept of Navy  
ONI 5145947

Effect of Lesions of the Epithalamus  
on the Metabolism and Body Temperatures  
of Rats, and Comparison With the  
Behaviour After Lesions of the  
Hypothalamus, by S. Donhoffer, et al.  
POLISH, per, Acta Physiologica  
Academie Scientiarum Hungaricae,  
Vol XV, No 12, 1959, pp 161-177.

CSIRO 4617

Scientific  
Minerals/Metals

Metallurgy and Metallography of Pure Metals,  
by V. S. Emel'yanov, A. I. Evstyukhin, 346 pp.  
RUSSIAN, bk.

Gordon & Breach

Effects of Electron Irradiation on the Electric  
Resistivity of Certain Metals, by N. F. Pravdyuk.  
RUSSIAN, paper, Effects of Neutron Emission on  
Electric Resistance of Certain Metals, Venice,  
May 7-11, 1962, IAEA, SM-25/87.

\*AEC

Internal Friction in Uranium, by V. E. Ivanov,  
B. I. Shapovayev.  
RUSSIAN, paper, Effects of Neutron Emission on  
Electric Resistance of Certain Metals, Venice,  
May 7-11, 1962, IAEA, SM-25/84.

\*AEC

Certain Problems on the Viscosity of Liquid  
Metals, by Ye. G. Shvidkovskiy.  
RUSSIAN, bk, Nekotoryye Voprosy Vyazkosti  
Rasplavlenykh Metallov, 1955, 206 pp.

NASA TT F-88

Effect of Outer Zones and Contact Friction on  
the Deformation Resistance During Rolling and  
Forging, by V. M. Lugovskoy.  
RUSSIAN, bk, Stal, Sbornik Statistic, 1961,  
pp 365-372.

BISI 2729

Thermodynamic Properties of Zirconium and Its  
Alloys With Tin, by G. B. Fedorov, E. A. Smirnov,  
RUSSIAN, papers, Thermodynamics of Nuclear Materials,  
Symposium, Vienna, May 21-25, 1962.

\*AEC

Surface Phase Composition of Some Metals After  
Electrosparkling With Different Electrodes, by  
K. F. Starodubov, B. P. Kolesnik.  
RUSSIAN, per, Dopovidi Ak Nauk Ukrains RSR,  
No 6, 1956, pp 539-542.

CSIRO

Developments in Refining Refractory Metals,  
RUSSIAN, np, Ekon Gazeta, 11 Dec 1961, p 4,  
Col 1-3.

\*FTD-TT-62-984

Scientific  
Minerals/Metals (Contd)

Research With Intervals, by L. Shchelkanovtsev,  
5 pp.

RUSSIAN, np, Ekon Gazeta, No 11 (32), 12 May  
1962, p 15.

JPRS 14410

Investigating the State of a Solid Solution  
of an El437A Alloy During Aging, by  
M. P. Arbuzov, M. I. Gitgartz, 12 pp.

RUSSIAN, per, Fiz Metal i Metallov, Vol XI,  
No 4, 1961, pp 568-574. 9665773

FTD-TT-62-509

Selected Articles From the Russian Periodical  
Iz Vysshikh Ucheb Zaved, Chern Metal.

Vol V, 1960, pp 117-180.

TIL/T.5321

The Investigation of Binary and Ternary  
Ferrous-and Molybdenum-Base Alloys by the  
Micro-T.E.M.F. Method, by Ye. V. Panchenko,  
E. M. Strug.

No 11, 1961, pp 155-158.

HB 5133

Variation in Mechanical Properties of Steel  
Wire While Being Drawn, by K. F. Starodubov,  
R. K. Babich, et al.

No 12, 1961, pp 54-60.

HB 5541

Formation of Oxide Inclusions in Steel  
Deoxidized With Aluminum, by P. M.  
Danilov.

No 1, 1962.

Kinetics of Desulfurization of Liquid Iron,  
by V. A. Grigoryan, (pp 33-40).

HB 5548

Effect of Vanadium and Boron on the Solubility  
of Hydrogen in Liquid Steel, by A. M. Yakushev,  
V. I. Yavoiskiy, (pp 52-56).

HB 5552

On the Effectiveness of Vacuum Treatment of  
Molten Steel, by I. A. Baranov, G. N. Oiks,  
et al, (pp 61-69).

HB 5550

Scientific  
Metals/Metals (Contd)

Selected Articles From the Russian Periodical  
Iz Vysshikh Ucheb Zaved, Chern Metal.

No 1, 1962.

Casting Steel 351 Alloyed With Boron and Cerium Jointly, by V. N. Gonchar, P. F. Ivantsov, (pp 160-168).

HB 5551

No 2, 1962.

Behavior of Hydrogen During the Melting and Teeming of Steel, by P. E. Nizhel'skiy, I. F. Pan'shih, (pp 44-50).

HB 5568

Causes of Lamination-Type Cracks in Metal-Powder Compacts, by A. N. Nikolayev, (pp 101-103).

HB 5650

Mar 1962, pp 60-66.

Effect of Rare-Earth Elements on the Surface Tension of Liquid Iron, by A. F. Vishkarev.

\*HB 5600

Non-Oxidizing Heating of Semiproducts by Naked Flame Accompanied by Burning Up of Products of Incomplete Combustion in the Working Area of the Furnace, by A. U. Pugovkin.

RUSSIAN, per, Kuznechno-Shtampovochnoe Proiz, Vol III, No 5, 1961, pp 34-36

BISI 2656

Heat Treatment Tempering of High-Speed Steel Tools in an Atmosphere of Steam, by A. P. Bulyayev, et al.

RUSSIAN, per, Metal i Obrabotka Metallov, No 11, 1958, pp 39-44.

HB 4431

Temper Brittleness of Steel, by L. M. Utevskiy, 12 pp.

RUSSIAN, per, Metal i Term Obrab Metallov, No 5, 1961, pp 35-41. 9605798

FTD-TT-62-513

The Effect of Mould Design on Crack Formation in Continuously Cast Billets, by V. P. Druzhinin, D. P. Evtyev, B. N. Katomin.

RUSSIAN, per, Metallurg, Dec 1961, pp 12-15.

BISI 2654

Scientific  
Minerals/Metals (Contd)

Concentration of Ferruginous Quarizites  
and Production of Pellets in the Krivoy Rog  
Iron Ore Basin, by A. I. Nikitin, 11 pp.  
RUSSIAN, per, Pelletirovaniye Zheleznykh  
Rud, pp 70-81.

JPRS 14303

Production of Fused Pellets at the Anshan  
Metallurgical Combine on the Chinese People's  
Republic, by A. I. Nikitin, 5 pp.  
RUSSIAN, per, Pelletirovaniye Zheleznykh Rud,  
pp 82-87.

JPRS 14303

Rolling of Metal Powders Into Thin Porous  
Strip, by Yu. N. Semenov.  
RUSSIAN, per, Poroshkovaya Metallurgiya,  
Vol I, No 5, 1961, pp 69-73.

HB 5589

The Spectra and Structure of Metal-Organic Com-  
pounds, Pt. 1. Vibrational Spectra of Tetraethyl  
Lead and Hexaethyl Diplumbene, by N. N. Vishinskiy,  
N. K. Rudneveliy.  
RUSSIAN, per, Trudy po Khim i Khim Tekh, Vol III,  
pp 538-544.

\*AEC

Flash Sulphating Roasting of Nonferrous Metal  
In Sulphides, by G. Ya. Leinerovich, et al.  
RUSSIAN, per, Tsvetnye Metally, 1957, pp 19-25.

CSIRO

Form in Which Nonferrous Metals Are Lost  
In Slags, by B. V. Lipon.  
RUSSIAN, per, Tsvetnye Metally, Vol XXX,  
No 9, 1957, pp 31-36.

CSIRO

Small Hermetically-Sealed Nickel-Cadmium  
Storage Batteries, by M. A. Dasoyan, 11 pp.  
RUSSIAN, per, Vest Elektroprom, No 2, 1960,  
pp 46-49. 9605788

FID-TT-61-271

On the Accuracy of Magnetographic Inspection  
of Welded Joints in Pipelines, by I. G.  
Sokolinskaya,  
RUSSIAN, per, Zavod Lab, Vol XXVIII, No 4, 1962,  
pp 462-464.

HB 5625

Scientific  
Minerals/Metals (Contd)

The Production and Properties of New Fe-Al Alloys, by A. Kabrhel.  
CZECH, per, Hutnicke Listy, Vol XV, No 4, 1960, pp 260-266.

\*U.K. Atomic Energy Authority Risley, TRG Inf Ser 102(C)

Directionally Controlled Solidification of 100-t Steel Castings, by P. Tavolotti, G. Iaccarino.  
FRENCH, rpt, Kongressvortrage, 28th International Foundry Congress, Vienna 1961, pp 95-106.

BISI 2606

The Action of CAO on Alumino-Silicate Refractories, by W. L. de Keyser, R. Wollast.  
FRENCH, per, Bulletin Societe Francaise de Ceramique, Jan/March, 1961, pp 25-33.

\*BISI 2863

Linings for Ingot Moulds, by M. Thomas.  
FRENCH, per, Centre Documentation Siderurgie Circulaire d'Information Techniques, Vol IX, 1953, pp 1421-1429.

\*BISI 2859

Synthesis of Tourmaline and of Yeremeyevite (Eichwaldite), by Mireille Michel-Levy, 4 pp.  
FRENCH, per, Comptes Rendus, Vol CCXXVIII, 1949, pp 1814-1816.

AEC SCI-T-412

Effect of Pressure on the Intermetallic Compound Formed by Diffusion Between Uranium and Copper, by Y. Adda, M. Beyeler, A. Kirianenko, 4 pp.  
FRENCH, per, Comptes Rendus, Vol CCL, 1960, pp 115-117. 9089540

AEC HW Tr-38

Metallurgy - Statistical Structures, by Marc Salesse, 8 pp.  
FRENCH, per, Comptes Rendus, Vol CCLIII, 1961, pp 1331-1333. 9089555

AEC Tr-5095

Scientific  
Minerals/Metals (Contd)

Selected Articles From the French Periodical  
Memoires (Les) Scientifiques de la Revue  
Metallurgie.

Vol LVII, Apr 1960, pp 241-253. BISI 2634  
Technique for Non-Destructive Electron  
Micrography and Microfractography. Applications  
to the Examination of Massive Parts, by A. Jacquet  
E. Mencarelli.

Vol LVII, No 11, 1960, pp 863-875. BISI 2585  
Radioactive Tracer Study of Impurity Enrich-  
ment During Oxidation of Steel, by Ch de Beaulieu,  
M. Cagnet, J. Moreau.

Vol LVIII, Sep 1961, pp 716-724. 9089543 AEC HW Tr-37  
Determination of the Equilibrium Diagram by  
Solid State Diffusion, by Y. Adda, M. Beyeler,  
A. Kirianenko, 14 pp.

Vol LVIII, Dec 1961, pp 901-914. BISI 2690  
Contribution to the Study of the Effect of  
Nickel (up to 9%) on the Mechanical Properties  
of Steels at Low Temperature, by M. Iron,  
A. Constant, A. Clerc, et al.

Curious Property of Coals, by P. Teissier.  
FRENCH, per, Revue de l'Industrie Minerale,  
Vol XL, No 6, 1955, pp 465-476. CSIRO 4141

Reaction of Calcium Sulphate and Lime With  
Slags and Pozzolans, by J. Chapelie.  
FRENCH, per, Revue des Materiaux de  
Construction, No 514/515, 1953, pp 193-201. CSIRO 4443

The Conventional Character of the Elastic Limit  
in Hard Steels for Prestressing, by J. Simon,  
P. Lercavins.  
GERMAN, paper, International Congress on  
Prestressed Concrete, Paper No.B.23, 1951  
10 pp. \*BISI 2853

Scientific  
Minerals/Metals (Contd)

Interclation Compounds With Alkali and Earth  
Alkali Metals, by W. Rudorff.

GERMAN, per, Angewandte Chemie, Vol LXXI,  
No 15/16, 1959, pp 487-491.

CSIRO 4770

Selected Articles From the German Periodical  
Archiv fur Eisenhuttenwesen.

Vol XXV, Jul/Aug 1954, pp 307-314.

BISI 2712

The Structure of Zinc Coatings on the  
Basis of Electrochemical Dissolutions,  
by W. Katz..

Vol XXXI, No 10, 1960, pp 595-601, 603-606.  
The Use of Polarization Potential Titration  
in the Iron and Steelworks Laboratory, by  
K. Abresch, E. Buchel.

BISI 2471

Vol XXXII, May 1961, pp 331-336.  
A Simple Method of Obtaining the Flow  
Curves of Steel at Room Temperature, by  
M. Reihle.

BISI 2633

Vol XXXII, Jul 1961, pp 489-491.  
X-Ray Investigations Into the Structure  
of Iron-Rich Iron-Silicon Alloys, by F. Lihl,  
H. Ebel.

BISI 2704

Vol XXXII, Dec 1961, pp 809-822.  
Indication of the Quality Characteristics  
of Low Carbon Steels by Damping Measurements,  
by W. Koster, G. Kampschulte.

BISI 2635

Vol XXXIII, Jan 1962.  
Foreword, by K. Richard. Long Time Behaviour  
of High Temperature Steels, Part I, by P.  
Bettzieche, (pp 27-34).

\*BISI 2873

Long Time Behaviour of High Temperature Steels,  
Part II, by H. Fabritius, (pp 33-47).

\*BISI 2874

Long Time Behaviour of High Temperature Steels,  
Part III, by A. Von Den Steinen, (pp 49-60).

\*BISI 2875

Scientific  
Minerals/Metals (Contd)

- Effect of the Preparation of Coking Coal,  
Including Intermediate Screening, on the  
Coke Quality, by J. Schmidt, W. Enghuber.  
GERMAN, per, Bergakademie Freiburg, Vol X,  
No 5/6, 1958, pp 292-300. CSIRO 4745
- Technology of Coking Coal Production,  
by W. Grunder.  
GERMAN, per, Chemie-Ingenieur-Technik,  
Vol XXX, 1958, pp 573-576. CSIRO 4660
- Experimental Contribution to the Fundamentals  
of Pelletising, by O. Knacke, H. Pohl.  
GERMAN, per, Chemie-Ingenieur-Technik,  
Vol XXXI, No 1, 1959, pp 50-54. CSIRO
- Formation of Subcutaneous Blowholes in Steel  
Castings, by J. Pribyl.  
GERMAN, per, Giessereitechnik, Vol IV, No 9,  
1958, pp 216-222. \*BISI 2861
- On the Life of Steel-Mill Molds, by J.  
Willems, O. Oelsen.  
GERMAN, per, Giesseretechnik, Vol XLVIII,  
No 15, 1961, pp 425-428. HB 5222
- Observations and Practice in the Enamelling  
of Aluminium and Aluminium Alloys, by  
W. Huttig.  
GERMAN, per, Mitteilungen der Forschungsgesellschaft Blechverarbeitung, No 17, Sep  
1961, pp 218. BISI 2622
- Determination of the True Stress in Metals  
in the Compression Test, by E. Siebel, A. Pomp.  
GERMAN, per, Mitteilungen aus dem Kaiser Wilhelm Institut fur Eisenforschung, Vol IX,  
1927, pp 157-171. \*BISI 2878
- Further Work on the Injection of Powdered  
Materials in Steelmaking, by W. Kuntscher,  
R. Peters.  
GERMAN, per, Neue Eutte, Vol VII, No 1,  
1962, pp 41, 42. HB 5610

Scientific  
Minerals/Metals (Contd)

Interclation Compounds With Alkali and Earth  
Alkali Metals, by W. Rudorff.

GERMAN, per, Angewandte Chemie, Vol LXXI,  
No 15/16, 1959, pp 487-491.

CSIRO 4770

Selected Articles From the German Periodical  
Archiv fur Eisenhuttenwesen.

Vol XXV, Jul/Aug 1954, pp 307-314.

BISI 2712

The Structure of Zinc Coatings on the  
Basis of Electrochemical Dissolutions,  
by W. Katz.

Vol XXXI, No 10, 1960, pp 595-601, 603-605.  
The Use of Polarization Potential Titration  
in the Iron and Steelworks Laboratory, by  
K. Abresch, E. Buchel.

BISI 2471

Vol XXXII, May 1961, pp 331-336.  
A Simple Method of Obtaining the Flow  
Curves of Steel at Room Temperature, by  
M. Reihle.

BISI 2633

Vol XXXII, Jul 1961, pp 489-491.  
X-Ray Investigations Into the Structure  
of Iron-Rich Iron-Silicon Alloys, by F. Lihl,  
H. Ebel.

BISI 2704

Vol XXXII, Dec 1961, pp 809-822.  
Indication of the quality Characteristics  
of Low Carbon Steels by Damping Measurements,  
by W. Koster, G. Kampschulte.

BISI 2635

Vol XXXIII, Jan 1962.  
Foreword, by K. Richard. Long Time Behaviour  
of High Temperature Steels, Part I, by P.  
Bettzieche, (pp 27-34).

\*BISI 2873

Long Time Behaviour of High Temperature Steels,  
Part II, by H. Fabritius, (pp 33-47).

\*BISI 2874

Long Time Behaviour of High Temperature Steels,  
Part III, by A. Von Den Steinen, (pp 49-60).

\*BISI 2875

Scientific  
Minerals/Metals (Contd)

Examination of the AS-Cast Structure of Heavy Forging Ingots, by K. L. Kiesel, K. Skuin, O. Liebscher, et al.

GERMAN, per, Neue Hutte, Vol VII, Feb 1962, pp 111-123.

BISI 2788

Determination of Aluminum by Direct Complexometric Titration, by S. Spauszus, C. Schwarz.

GERMAN, per, Neue Hutte, Vol VII, 1962, No 3, pp 180-181.

HB 5654

Investigations of Improvement of Raw Ingots Surface by Use of Corrugated Pasteboard, by W. Kransdorf.

GERMAN, per, Radex Rundschau, Apr 1961, pp 543-545.

\*BISI 2893

Accurate Determination of Gases in Metals by Gas Chromatography, by H. Feichtinger, et al.

GERMAN, per, Schweizer Archiv, Vol XXVIII, No 3, 1962, pp 125, 126.

HB 5653

Selected Articles From the German Periodical Stahl und Eisen.

Vol LXXXI, 11 May 1961.

Phase Separation of Slags During the Normal Conduct of a Basic Converter Steel Melt, by H. vom Ende, G. Mahn, (pp 641-645).

BISI 2799

Aptitude of the Static Torsion Test for Determining the Toughness of Very Hard Steels, II, by K. Bungardt, O. Mulders, W. Schmidt, (pp 670-675).

BISI 2718

Vol LXXXI, 28 Sep 1961, pp 1322-1329.

Alloy Formation During Electro-Tinplating and Soldering Tests, by W. Fichtl, V. Seul, M. Nacken.

BISI 2484

Scientific  
Minerals/Metals (Contd)

Selected Articles From the German Periodical  
Stahl und Eisen. (Contd)

- Vol LXXXI, 12 Oct 1961, pp 1404-1409.  
Embrittlement of the Edges of Sheared  
Heavy Plates Made of Basic Converter  
and Open-Hearth Steel, by F. K. Naumann. \*BISI 2855
- Vol LXXXI, Nov 1961, pp 1503-1510.  
The Use of Different Grades of Lime in  
Open-Hearth Steelmaking, by K. H. Obst,  
W. Kohler, E. Meier-Cortes, et al. BISI 2803
- Vol LXXXI, No 24, 1961, pp 1592-1598.  
Analytical Study of Reactions Taking Place  
When Calcium-Containing Deoxidizers Are  
Added to Liquid Steel, by W. Koch. HB 5425
- Vol LXXXII, 4 Jan 1962, pp 23-.  
Influence of Aluminium and Nitrogen  
on the Peculiar Grain Size of Chrome  
Manganese Case-Hardening Steels, by  
P. Water, I. Wiesenecker. \*BISI 2895
- Vol LXXXII, 18 Jan 1962, pp 97-105.  
Contribution to the Ultrasonic Inspection  
of Steel Rounds, by D. Pohl. HB 5474
- Vol LXXXII, No 3, 1962, pp 147-154.  
Present State of Pelletizing of Iron  
Ores, by K. Meyer. HB 5523
- Vol LXXXII, No 4, 1962, pp 203-206.  
General Discussion of Deoxidation of  
Steel With Technical Calcium-Silicon-  
Aluminum Alloys, by G. Henke, et al. HB 5540

Scientific  
Minerals/Metals (Contd)

Selected Articles From the German Periodical  
Stahl und Eisen. (Contd)

Vol LXXXII, No 10, 1962, pp 597-603.  
Development of the Continuous Casting of  
Steel for Direct Hot Rolling Into Strip,  
by H. Benteler.

HB 5630

Vol LXXXII, 1 Mar 1962, pp 268-275.  
Slag Ladles Made of Cast Steel, by A. Hencks.

\*BISI 2890

The Stability of Stacking Fault Tetrahedra in  
Quenched Cubic Surface-Centered Metals and Alloys,  
by C. Czjzek, A. Seeger, S. Mader, 16 pp.  
GERMAN, per, Technische Hochschule, 1961.  
9093520

AEC UCRL Tr-324

Contribution to Present Knowledge About  
the Resistance of Sintered Alumina to  
Corrosion, by G. Jaeger, R. Krassmann.  
GERMAN, per, Werkstoffe und Korrosion,  
No 3, 1952, pp 401-415.

CSIRO

Chromising of Non-Ferrous Metals, by G. Woldt.  
GERMAN, per, Werkstoffe und Korrosion, Vol XII,  
Aug 1961, pp 436-493.

\*BISI 2851

The Significance of Pore Diffusion in the  
Reduction of Iron Ores, by L. von Bogdandy,  
W. Janke.  
GERMAN, per, Z fur Elektrochemie, Berichte  
der Bunsengesellschaft fur Physikalische  
Chemie, Vol LXI, No 9, 1957, pp 1146-1153.

BISI 2804

Elasticity and Plasticity of an Austenitic  
CrNi Steel, by K. Salmutter, F. Stangler.  
GERMAN, per, Z fuer Metallkunde, Vol LI,  
No 9, 1960, pp 544-548.

CEGB 2066

The Effects of Selective Oxidation in Binary and  
Tertiary Alloys, by H. Pfeiffer.  
GERMAN, per, Z fuer Metallkunde, Vol LII,  
No 7, 1961, pp 431-438.

\*BISI 2857

Scientific  
Minerals/Metals (Contd)

Contribution to the Technology of Stainless  
Sintered Steels, by R. Reinstadler.  
GERMAN, per, Z fuer Metallkunde, Vol LIII,  
No 2, Aug 1962, pp 86-89.

HB 5635

Extraction of Uranium, Plutonium, Ruthenium,  
and Circonium With Tri-sio-octylamine, by  
Von Werner Knoch, 4 pp.  
GERMAN, per, Z Naturforsch, Vol XVIA, 1961,  
pp 525-527. 9093524

AEC Tr-5197

Influence of Heat Transfer on the Output of  
the Burning Zone of Lime Shaft Kilns, by  
G. Balazsuvics.  
GERMAN, per, Zement-Kalk-Gips, No 10, 1959,  
pp 466-471.

CSIRO

Process and Equipment for Continuous  
Electrolytic Refining of Metals, by  
I. R. Muller.  
GERMAN, Patent No 907,464, 1954.

CSIRO

Epoxi Resins Netted With Organic Metal  
Compounds, by Magyar Laura.  
HUNGARIAN, per, Elektrotechnika, No 2/3,  
1962, pp 82-85.

\*525th MI Gp  
I-1680  
ID 2203214

Etehing Figures on Fe and FE-Si Alloys for  
the Determination of Crystallographic Orienta-  
tions and Relations With the Structure of the  
Ferro-Magnetic Domains, by F. Brossa, A. Ferro,  
G. Venturello.

ITALIAN, per, La Metallurgia Italiana, Vol LI,  
No 4, 1959, pp 139-144.

BISI 2351

Study of the Action of Boron in Low Alloy  
and Carbon Steels, by A. Bargone,  
L. Marchesini, G. Libondi.

ITALIAN, per, Technica Italiana, Vol XXVI,  
Jun 1961, pp 247-261.

BISI 2575

Scientific  
Minerals/Metals (Contd)

Investigation of Pt-Mo Alloys, by  
H. Nishimura.

JAPANESE, per, Nihon Kinzoku Gakkaishi,  
Vol XXII, No 8, 1958, pp 425-428.

AERE, Harwell Tr-884

Effect of High Environmental Temperatures on the  
Lactic Acid Content in Blood and Sweat, by  
L. Strzoda, 6 pp.

POLISH, per, Acta Physiologica Polonica, Vol IX,  
1958, pp 445-450.

Navy Tr 3174/NMS 710

Deformation Rate in Hot Rolling, by Z.  
Wusatowski.

POLISH, per, Prace Instytut Hutnicz, No 2,  
1958, pp 120-123.

NLL M.4728

Kinetics of Silicon Impregnation of Carbon  
Steel, by D. Raseyev.

RUMANIAN, per, Studii si Cercatari de Metalurgie,  
No 2, 1961, pp 161-170.

HB 5428

Scientific  
Nuclear Physics

What Russian Scientists Say About  
Fallout, by Audrey Vladimirovich  
Lebedinsky, 124 pp.  
RUSSIAN, bk.

Collier Books

The Chemical Effect of the (n,p)  
Reaction: Neutron Irradiation of  
the Chlorobenzene - Benzene System,  
by K. Panek, L. Slama, 5 pp.  
RUSSIAN, rpt, Chemical Effects of  
Nuclear Transformations, Vol II,  
24-27 Oct 1960, pp 209-211.

AEC Tr-5093

Selected Articles From the Russian  
Paper Effects of Neutron Emission  
on Electric Resistance of Certain  
Metals, Venice, 7-11 May 1962, IAEA.

\*AEC

(SM-25/10)  
Installations for Studying Varia-  
tion in Electrical Properties of  
Semiconductors in a Nuclear Radia-  
tion Field, by G. Glants, N. Dutesku,  
et al.

(SM-25/86)  
Effects of Neutron Radiation on  
Ordered Alloy Fe<sub>3</sub>AL, by  
G. P. Sayenko.

(SM-25/75)  
Analogy in Radiation Effects on  
Solids of Nuclear Radiation and  
Slow-Charged Particle Fluxes, by  
S. V. Starodubtsev.

(SM-25/85)  
Relaxation of Elastic Intensities  
in Materials Exposed to Radiation,  
by P. A. Platonov.

**Scientific  
Nuclear Physics (Contd)**

**Selected Articles From the Russian  
Paper Nuclear Electronics, Vol I,  
Proceedings of the Conference on  
Nuclear Electronics Sponsored by the  
IAEA, Belgrade, 15-20 May 1962.**

\*AEC

Liquid Scintillation Counters for  
Registering Neutrons, by I. Vizi,  
G. P. Zhukov, G. I. Zabiyakin, et al,  
(pp 27-36).

A Gaseous Scintillation Counter  
Filled With  $\text{He}_3$  for Neutron  
Spectrometry, by S. A. Baldin,  
V. V. Matveyev, (pp 37-45).

Cerium-Activated Vitreous Scintillators  
for Neutron Detection, by  
V. K. Voitovetskiy, N. S. Tolmacheva,  
(pp 127-130).

Plastic Scintillators for Recording  
Thermal Neutrons, by E. E. Baroni,  
D. V. Viktorov, I. M. Rozman, et al,  
(pp 131-138).

A Slow Neutron Scintillation Counter  
Insensitive to Gamma Radiation, by  
I. V. Kirpichnikov, (pp 139-141).

A System of Indicating the Co-ordinates  
of Particle Entry Into an Emulsion  
Chamber (Scintillation Counter)  
C UY-1, by A. Dvoretskiy,  
R. A. Serevryakov, et al, (pp 313-320).

A Study of the Possibilities of Using  
Cadmium-Sulphide Crystal Counters,  
by M. Borisov, M. Marinov, (pp 363-377).

Semiconducting Spectrometers for  
Charged Particles, by L. A. Zubritskiy,  
A. I. Popov, et al, (pp 591-597).

Scientific  
Nuclear Physics (Contd)

On K-Meson-Hyperon Resonances, by  
A. I. Baz', V. G. Vaks, A. I. Larkin,  
38 pp.  
RUSSIAN, bk, O K-Mezon-Giperonnykh  
Rezonansakh, 1962. 9093481

AEC UCRL Tr-807

Thermochemical Effects of Ionizing  
Radiation, by V. I. Gol'danskiy,  
Yu. M. Kagan.  
RUSSIAN, papers, Proceedings of the  
Symposium on Chemical Effects of  
Nuclear Energy Agency, Vol I, 1961,  
pp 47-59, STI-PUB-34.

AEC Tr-5053

The Hot Synthesis of Compounds Labeled  
With Tritium and C<sup>14</sup>, by A. N. Nesmeyanov,  
21 pp.  
RUSSIAN, paper, Proceedings of the  
Symposium on Chemical Effects of  
Nuclear Transformations, Vol II,  
1961, pp 269-290. 9089551

AEC Tr-5082

Problems of Atomic Power Engineering,  
by A. Aleksandrov, 11 pp.  
RUSSIAN, np, Ekon Gazeta, No 12, (33),  
Mar 19, 1962, pp 11, 12. 9677417

FTD-TT-62-631

Isotopes of Uranium in Natural Con-  
ditions. II. Isotopic Composition  
of Uranium of Minerals, by  
V. V. Cherdyncev, D. P. Orlov,  
E. A. Isabayev.  
RUSSIAN, per, Geokhimiya, No 10,  
1961, pp 840-848. 9093447

AEC Tr-5101

Research of the Processes of Heat  
Transfer in the Fuel Elements of  
Nuclear Reactors by the Method of  
Hydraulic Simulation, by O. I. Yaroshevich.  
RUSSIAN, per, Inzhenerno Fiz Zhur,  
Vol III, No 5, 1960, pp 81-85.

\*FTD-TT-62-1068

Scientific  
Nuclear Physics (Contd)

Gamma Spectra in Heavy Ion Reactions,  
by Yu. Ts. Oganesyan, Yu. V. Lobanov,  
B. N. Markov, 29 pp.  
RUSSIAN, per, Joint Inst for Nuclear  
Research, Dubna, JINR-P-802. 9093486

AEC UCRL Tr-819(L)

Resonance High-Frequency Discharge in  
a Cyclotron, by B. A. Zager, V. G. Tishin,  
40 pp.  
RUSSIAN, per, Joint Inst for Nuclear  
Reactions, Dubna, JINR-P-811, 1961.  
9093485

AEC UCRL Tr-818

Methods of Changing the Duration of the  
Time of the Beam Interaction With the  
Target in a 10 Bev Synchrophasotron, by  
G. S. Kazanskiy, A. I. Mikhailov,  
K. P. Myznikov, 41 pp.  
RUSSIAN, per, Joint Inst of Nuclear  
Research, Dubna, JINR-P-84, 9093482

AEC UCRL Tr-813

Problems of Atomic Energy, by  
A. P. Aleksandrov.  
RUSSIAN, per, Vest Ak Nauk SSSR, Vol XXXII,  
No 5, 1962, pp 20-32.

\*FTD-TT-62-994

Annular Synchrocyclotron With Radial  
Sectors, by Miroslav Karamsin, 21 pp.  
CZECH, per, Jaderna Energie, No 8,  
1961, pp 265-271. 9077444

FTD-TT-62-285

Influence of Nuclear Radiation on the  
Properties of Constructional Steel:  
Parts 1-5, The Results of Designing and  
Constructing Reactor Pressure Vessels,  
by P. H. J. Simonis.  
DUTCH, per, Atoomenergie, No 8,  
pp 166-171; No 9, pp 183-194;  
No 10, pp 211-218; No 11, pp 226-233,  
1961; No 1, 1962, pp 10-18.

\*U.K. Atomic Energy Authority  
Risley, TRG Inf Ser 170(R)

Powder Sintering and Extrusion for the  
Fabrication of U-Al and UO<sub>2</sub>-Stainless  
Steel Dispersion Fuel Elements, by  
L. Meny, J. Buffet, C. Sauve, 16 pp.  
FRENCH, rpt, 4th Plansee Seminar,  
20-24 Jun 1961. 9093499

AERE, Harwell Tr-883

Scientific  
Nuclear Physics (Contd)

Sintering of Uranium Oxide in Hydrogen  
at 1350°C, by A. Bel, R. Delmas,  
B. Francois.

FRENCH, per, J of Nuclear Materials,  
1959, pp 259-270. 9089548

AEC Tr-5083

Shell Model of the Atomic Nucleus,  
by O. Haxel, et al.  
GERMAN, per, Ergebnisse der Exakten  
Naturwissenschaften, Vol XXVI, 1952,  
244 pp.

Univ of Melbourne T.157

Delayed Neutrons in the Nuclear  
Fission, by Klaus Werner Hoffman,  
13 pp.  
GERMAN, per, Naturwissenschaften,  
Vol XLVIII, No 2, 1961, pp 36-39.

Navy Tr 3188/NRL 893

Universal Method for Stabilizing the  
Regulation of Scintillation Spectro-  
meter, by S. Haun, D. Kamke, 15 pp.  
GERMAN, per, Nuclear Instruments and  
Methods, Vol VIII, 1960, pp 331-338.

AEC Tr-4424

Production of Short Lived Isomers  
by Means of Pulsed Thermal Neutron  
Activations, by K. F. Alexander,  
V. Bredel, 9 pp.  
GERMAN, per, Nuclear Physics, Vol XVII,  
No 1, 1960, pp 153-162. 9088815

A.C.S.I.L. No 1390

Remote Handling Device for the  
Manipulation of Isotopes of  
Domestic Manufacture, by J. Hirling,  
5 pp.  
HUNGARIAN, per, Energia es Atomtechnika,  
Vol XIII, No 8, 1960, pp 333-380.  
9677410

FTD-TT-62-530

A Study on the Transfer Functions of  
Spatial Kinetics in the Nuclear  
Reactor, by A. Takeda, 23 pp.  
JAPANESE, per, Nippon Genshiryoku  
Gakkaishi, Vol II, No 9, 1960,  
pp 523-530. 9093500

AERE, Harwell Tr-888

Scientific  
Physics

Radioluminescence Yield of Organic Substances, by Z. A. Chizhikova, Part 4.

RUSSIAN, bk.

CB

Physicochemical Hydrodynamics, by V. G. Levich, 750 pp.  
RUSSIAN, bk.

\*Prentice-Hall, Inc.

On the Broadening and Shift of Spectral Lines in the Plasma of a Gaseous Discharge, by M. A. Mazing. Part 2.

RUSSIAN, bk.

CB

Theory of Order-Disorder in Alloys, by M. A. Krivoglaz, A. A. Smirnov, 450 pp.

RUSSIAN, bk.

Scripta Technica

On Excitation Spectra in Spark Discharges, by N. K. Sukhodrev, Part 3.

RUSSIAN, bk.

CB

Calculation of Wave Functions and Oscillator Strengths of Complex Atoms, by L. A. Vainshtein. Part 1.

RUSSIAN, bk.

CB

Fission Cross-Sections of  $^{233}\text{U}$ ,  $^{235}\text{U}$  and  $^{239}\text{Pu}$  in the Neutron Energy Range 0.3 to 2.5 MeV, by G. N. Smirenkin, V. G. Nesterov, et al.  
RUSSIAN, rpt, 1962.

\*AERE, Harwell Tr-1649

A Precise Comparison of the Mean Kinetic Energy of Fragments in Fission of  $^{235}\text{U}$  by Thermal Neutrons and by Neutrons of Means Energy 5 MeV, by V. N. Ikolovich, G. N. Smirenkin, et al.

RUSSIAN, rpt, 1962.

\*AERE, Harwell Tr-1650

Scientific  
Physics (Contd)

An Empirical Formula for the Means  
Number of Fission Neutrons, by  
L. D. Gordeyeva, G. N. Smirenkin.  
RUSSIAN, rpt, 1962.

\*AERE, Harwell Tr-1651

Experiments Carried Out at High  
Temperatures and the Determination  
of the Coefficients of Reaction  
in Gas Exchange, by A. S. Predvoditelev,  
et al.  
RUSSIAN, rpt, The Combustion of  
Spherical Particles in Flow, Ak Nauk  
SSSR, 1949.

NLL M. 4840

The Influence of Preliminary Vapour-  
ization on the Completeness and  
Stability of Combustion of Atomized  
Fuel, by V. Ya. Basevich.  
RUSSIAN, bk, V. sb. Goreniye pri  
Ponizhennykh Davleniyakh i Nekotoryye  
Vopr. Stabilizatsii Plameni v  
Odnofazn. o Dvukhfazn. Sistemakh,  
M., AN SSSR, 1960, pp 71-85.

\*FTD-TT-62-948

A High Intensity Injector of Hydrogen  
Ions, by R. A. Demirkhanov, O. F.  
Poroshin, P. E. Belensov, 10 pp.  
RUSSIAN, paper, IAEA Conference on  
Plasma Physics and Controlled Nuclear  
Fusion Research, Salzburg, Sep 1961.

AEC UCRL Tr-748

The Calculation of Over-All Reaction  
Rates and Flame Velocities in Gas-  
Mixtures, by O. A. Tsukhanova, 15 pp.  
RUSSIAN, bk, Issledovaniya Protsessov  
Goreniye, 1958, pp 81-90. 9665767

FTD-TT-62-270

Theory Fundamentals of Metal Treatment  
Under Pressure, by S. I. Gubkin,  
B. P. Zvorono, 194 pp.  
RUSSIAN, bk, Osnovy Teorii Obrabotki  
Metallov Dvleniyem, 1959, pp 148-240,  
297-348. 9665446

FTD-TT-61-4

Scientific  
Physics (Contd)

Methods for Detecting in Leakage  
Spots in Vacuum Systems, by  
B. I. Korolyev, 34 pp.  
RUSSIAN, bk, Osnovy Vakuumnoy Tekhniki,  
1957, pp 251-271. 9677412

FTD-TT-62-346

Radioactive Isotopes in Engineer  
Research, by N. V. Glazov.  
RUSSIAN, bk, Primenenie Radioaktivnykh  
Isotopov v Inzhenernykh Izuskaniyakh,  
1962, 68 pp.

\*AEC

Strength and Plasticity of Metals at  
Low Temperatures, by G. V. Uzhik,  
180 pp.  
RUSSIAN, bk, Prochnost i Plastichnost  
Metallov pri Nizkikh Temperaturakh, Ak  
Nauk SSSR, 1957.

NLL

Computers and Servo-Systems, by  
N. T. Rozorenov.  
RUSSIAN, bk, Schetno-Reshayusuchiye  
Ustroystva i Sledyashchiye Sistemy,  
1961, 52 pp.

\*FTD-TT-62-1074

Investigation of the X-Ray Radiation  
From the Sun During the Total Solar  
Eclipse on 15 February 1961, by  
S. L. Vasilyeva, S. L. Mandelshtan,  
Yu. K. Voron'ko, et al, 10 pp.  
RUSSIAN, rpt, Spektral'naya Laboratoriya,  
Fiz Inst imeni P. N. Lebedeva Ak Nauk  
SSSR, Report No A-109, 1961.

Navy Tr 3187/  
NRL 892

The Theory of Combustion of Gas Mixture  
Flow and the Critical Characteristics  
of Its Ignition, by L. N. Khitrin,  
30 pp.  
RUSSIAN, bk, Teoriya i Praktika  
Szhiganiya Gaza, 1958, pp 94-115.  
9665757

FTD-TT-62-1331

Scientific  
Physics (Contd)

Theory and Design of Pneumatic Power Devices, by Yelena Vasil'yevna Gerts, Gherman Vladinirovich Kreynin, 389 pp. RUSSIAN, bk, Teoriya i Raschet Silovykh Pnevmaticheskikh Ustroysiv, 1960, 176 pp.

JPRS 14313

The Theory of Point Explosion, by V. P. Korobeynikov, N. S. Mel'nikova, et al, 571 pp. RUSSIAN, bk, Teoriya Tochechnogo Vzryya, 1961, pp 3-330.

JPRS 14334

Problems of Heat Exchange in Rarefied Gases, by L. Ye. Kalikhman. RUSSIAN, papers, Tezisy Dokladov i Soobshcheniy (Dopolneniye). Soveshchaniye po Teplo- i Massoobmenu, Minsk, 1961, pp 31-32.

\*FTD-TT-62-978

Selected Articles From the Russian Papers Thermodynamics of Nuclear Materials, Symposium, Vienna, 21-25 May 1962.

\*AEC

Investigation on Evaporation Velocity of Sample Metal Oxides Heated by Electric Current, by N. M. Voronov, A. S. Danilin, I. T. Kovalev.

Determination of Vapor Elasticity in Uranium Compounds, by V. E. Ivanov, A. A. Kruglykh, V. S. Pavlov.

Vapor Pressure of Metallic Yttrium, by An. N. Nesmeyanov, Yu. A. Perselkov, V. V. Karelkin.

Heats of Formation of Intermetallic Compounds of Pii With Al and Fe, U With Fe, by V. V. Akhachinskiy, L. M. Kapytin, M. I. Ivanov.

Scientific  
Physics (Contd)

Selected Articles From the Russian  
Book Tret'ye Vses. Soveshchaniye po  
Teorii Goreniya.

Vol I, 1960, pp 51-59.  
Theoretical Analysis of Vibratory  
Combustion of a Gaseous Mixture  
in a Pipe, by B. V. Raushenbakh.

\*FTD-TT-62-874

Vol II, 1960.  
Heat Conditions of the Boundary  
Layer During Heterogeneous Com-  
bustion, by L. A. Vulis, V. P.  
Kashkarov, (pp 98-106).

\*FTD-TT-62-934

Calculation of a Cylindrical  
Straight-Flow Combustion Chamber  
With Ignition on the Flow Axis,  
by A. V. Talantov, (pp 270-273).

Selected Articles From the Russian  
Book v. sb. Tret'ye Vses. Soveshchaniye  
po Teorii Goreniya, 1960.

Vol I.  
On Chemical Reaction Rates in  
Turbulent Flows, by A. S. Predvoditelev,  
(pp 138-159).

\*FTD-TT-62-874

On Acoustic Phenomena During Spin  
Detonations, by R. I. Soloukhin,  
M. Ye. Topchiyan, (pp 169-174).

On a Certain Analogy Between Burning  
in a Rocket Engine and in a  
Detonation Wave, by Yu. N. Denisov,  
(pp 193-199).

Scientific  
Physics (Contd)

Selected Articles From the Russian  
Book v. sb. Tret'ye Vses. Soveshchaniye  
po Teorii Gorenija, 1960. (Contd)

**Vol II.**

An Investigation of Drop Evaporation  
in a Fuel Flame at High Temperature,  
by K. P. Yerastov, (pp 3-8).

\*FTD-TT-62-934

An Investigation of the Evaporation  
of Drops of Liquid in a Flow of  
Air, by M. S. Volynskiy,  
L. I. Chernoshchekov, (pp 9-18).

**Vol XIII.**

Ignition in the Flow, by S. A.  
Gol'denberg, (pp 228-237).

On Applying the Combined-Control  
Theory to Cybernetic Adaptive Systems,  
by A. G. Ivakhnenko.  
RUSSIAN, bk, Trudy Mezhdunarodnoy  
Federatsii po Avtomaticheskogo  
Upravleniya, 1st Congress, Moscow, 1960.  
Teoriya Diskretnykh, Optimal'nykh i  
Samonastraivayuschikhsya Sistem,  
Vol II, 1961, pp 709-725.

\*FTD-TT-62-977

Accelerators of Charged Particles, by  
B. S. Ratner, 112 pp.  
RUSSIAN, bk, Uskoriteli Zarazhennykh  
Chastits, Moscow, Fizmatgiz. (Series:  
Populyarnaya Fizicheskaya Biblioteka).

\*FTD-TT-62-957

Oscillatory Combustion, by B. V.  
Raushenbakh.  
RUSSIAN, bk, Vibratsionnoye Gorenije,  
1961, pp 13-18, 19-74, 75-111, 344-375.

\*FTD-TT-62-942

Table for Calculating the Thickness of  
Lead Glass Shielding From "Broad Beam"  
 $\gamma$ -Rays, by L. M. Mikhaylov, Z. S.  
Aref'yeva, 4 pp.  
RUSSIAN, per, Atom Energ, Vol XIII,  
No 1, 1962, pp 58-62. 9677366

FTD-TT-62-416

Scientific  
Physics (Contd)

Critical Tests on a Heavy-Water  
Reactor Stand With Rod-Shaped Fuel  
Elements, by Yu. G. Abov, V. F. Belkin,  
7 pp.  
RUSSIAN, per, Atom Energ, Vol XII,  
No 2, 1962, pp 156-159. 9677438

FTD-TT-62-635

Estimating the Combination-Frequency  
Level and the Admissible Fluctuation  
in the Level of Remote-Control Frequency  
Code Signals Sent Simultaneously, by  
V. L. Inosov, B. K. Skirta, 14 pp.  
RUSSIAN, per, Avto i Tele, Vol XXIII,  
No 2, 1962, pp 214-221. 9677408

FTD-TT-62-661

Some Results of the Electrophotometric  
Observations of OI, Na and Oh Emission  
and of the Continuous Background of the  
Flow of the Night-Sky, by L. M.  
Fishkova, G. V. Markova.  
RUSSIAN, per, Byul Abastumanskoy  
Astrofiz Observ, No 24, 1959, pp 161-173.

\*FTD-TT-62-1076

Selected Articles From the Russian  
Periodical Dok Ak Nauk SSSR.

Vol LIII, No 6, 1946, pp 515-518.  
Ionization of Gases and Their  
Breakdown Strength, by B. M.  
Gokhberg, E. Ya. Zandberg.

NLL M. 3575

Vol LXXVIII, 1951, pp 889-891.  
9093503  
On the Theory of Production of Many  
Particles, by I. Pomeranchuk, 11 pp.

AEC UCRL Tr-825

Vol XCIV, No 4, 1954, pp 635-638.  
Lateral Flow of a Fluid From a  
Channel Having a Constant Section,  
by V. N. Taliyev.

\*ACSI I-1643  
ID 2203201

Scientific  
Physics (Contd)

Selected Articles From the Russian  
Periodical Dok Ak Nauk SSSR. (Contd)

Vol CXXXVII, No 2, 1961.  
On the Question of the Composition  
of a Binder Hardening at High  
Temperatures and Pressures, by  
P. P. Budnikov, et al, (pp 363-365).

NLL M. 4770

Adsorption of Nitrogen, Argon and  
Crypton on Various Surfaces and  
Determination of Surface Area,  
by M. G. Kaganer, (pp 405-408).

U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-117(W)

Vol CXXXVIII, No 3, 1961, pp 529-532.  
9677433  
On the Theory of Optimal Tracking,  
by D. L. Kelendzheridze, 6 pp.

FTD-TT-62-484

Low Frequencies in Raman Spectra of  
Liquid Carbon Tetrachloride. Part I,  
II, by P. D. Simova, Ya. Khr. Minchev,  
8 pp.

RUSSIAN, per, Dok Bolgarskoy Ak Nauk,  
Vol VIII, No 1, 1954, pp 5-12.

Navy Tr 3190/  
APL T-300

Low Frequencies in the Raman Spectrum  
of Tin Tetrachloride and Chloroform,  
by P. D. Simova, 4 pp.

RUSSIAN, per, Dok Bolgarskoy Ak Nauk,  
Vol IX, No 3, 1956, pp 9-12.

Navy Tr 3192/  
APL T-301

On the Equilibrium of an Elastic Cone,  
Loaded With a Concentrated Moment at  
the Vertex, by A. T. Ulitko.  
RUSSIAN, per, Dopovidi Ak Nauk  
Ukrain RSR, No 10, 1960, pp 1349-1352.

\*FTD-TT-62-1013

Heat Transfer by Undulatory Strips  
in a Horizontal Air Current, by  
O. O. Krem'ov, M. T. Dukhenko.  
RUSSIAN, per, Dopovidi Ak Nauk  
Ukrain RSR, No 11, 1961, pp 1495-1497.

\*FTD-TT-62-971

**Scientific  
Physics (Contd)**

The Collision Integral of Charged  
Particles in a Magnetic Field, by  
V. M. Yeleonskiy, P. S. Zyrayanov,  
et al, 4 pp.

RUSSIAN, per, Fiz Metal i Metallov,  
Vol XI, No 6, 1961, pp 955-1957.  
9665758

FTD-TT-62-378

Automatic Sampling of Fractions of  
Alveolar Air at a Given Depth of Expira-  
tion, by M. S. Shneyder, N. S. Didenko,  
7 pp.

RUSSIAN, per, Fiz Zhur SSSR, Vol XLVIII,  
No 1, 1962, pp 99-103.

JPRS 14302

On the Problem on Radioactivity of  
Water in Open Reservoirs, by V. M.  
Kupriyanova, Ye. S. Romanova, 5 pp.

RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 14-17.

JPRS 14345

On the Stability of Adaptation (On  
Deadaptation), by B. B. Koyranskiy,  
9 pp.

RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 22-28.

JPRS 14345

Some Results of the Study of the  
Activity [Effect] of Small Doses of  
Ultraviolet Radiation on the Defense-  
Adaptation Functions of the Organism,  
by M. L. Koshkin, 9 pp.

RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 70-76.

JPRS 14345

Ways of Increasing the Useful Energy  
Efficiency of H. E. In Excavation  
Explosions, by G. I. Pokrovskiy, 16 pp.  
RUSSIAN, per, Gornyy Zhur, No 11, 1952,  
pp 21-24.

AEC UCRL Tr-770(L)

Scientific  
Physics (Contd)

Selected Articles From the Russian  
Newspaper Inzhenerno-Fiz Zhur.

Vol IV, No 2, 1961, pp 77-81.  
9665770

FTD-TT-62-327

Heat and Mass Transfer During  
Evaporation of a Liquid in a Forced  
Gas Flow, by G. T. Sergeyev, 6 pp.

Vol IV, No 3, 1961, pp 105-109.  
9677357

FTD-TT-62-113

The Viscosity of Air, Nitrogen,  
and Argon at Low Temperatures and  
Pressures to 150 Atmospheres, by  
G. P. Filippova, I. P. Ishkin,  
7 pp.

Vol IV, No 5, 1961, pp 33-37.  
9665783

FTD-TT-62-329

External Heat and Mass Transfer  
in Evaporation of a Liquid From a  
Capillary-Porous Body, by G. T.  
Sergeyev, 7 pp.

Vol IV, No 9, 1961, pp 17-23.  
The Aerodynamic Resistance of a  
Fluidized Bed, by A. V. Chechetkin.

AERE, Harwell Tr-1571

Vol V, No 1, 1962, pp 115-129.  
Electric Arc Heaters for Obtaining  
High Temperature Streams, by O. L.  
Shashkov, V. I. Kas'ko, et al.

\*FTD-TT-62-1092

Vol V, No 2, 1962, pp 15-18.  
Motion of a Body in a Fluidized  
Bed, by Y. P. Gupalo.

U.K. Atomic Energy  
Authority  
Springfields Tr-91

Scientific  
Physics (Contd)

Selected Articles From the Russian  
Periodical Inzhenerno-Fiz Zhur.  
(Contd)

Vol V, No 4, 1962.

Experimental Study of the Cessation  
of Film Boiling of a Fluid on an  
Immersed Heating Surface, by  
V. G. Morozov, (pp 15-19).

\*AEC

Latent Heat of Vaporization for  
Alkali Metals, by E. E. Shpil'rayn,  
E. I. Asinovskiy, (pp 35-40).

\*FTD-TT-62-1085

The Problem of the Patterns of  
Behaviour of the Flow of a Film on  
a Vertical Cylindrical Tube, by  
B. S. Kasimov, F. F. Zigmund,  
(pp 71-74).

\*AEC

Determining the Coefficients of Heat  
Loss in Supersonic Flow of Rarefied  
Gas in Pipes, by A. Ye. Marenov.  
RUSSIAN, per, Inzhenernyy Sbornik, Ak  
Nauk SSSR, Inst Tekh, Vol XXX, 1960,  
pp 139-148.

\*FTD-TT-62-974

Gas Flow During Combustion in Tubes With  
Porous Walls, by V. I. Yagodkin.  
RUSSIAN, per, Inzhenernyy Zhur, Vol I,  
No 3, 1961, pp 165-169.

\*FTD-TT-62-1071

The Most Probable Velocity of Propagation of Electromagnetic Waves,  
by A. I. Kartashen.  
RUSSIAN, per, Izmeritel' Tekh, No 3,  
1962, pp 59-60.

\*Navy/APL

Evaluating the Critical Load of a  
Cone, by P. Myursepp, 6 pp.  
RUSSIAN, per, Iz Ak Nauk Estonskoy  
SSSR, Vol X, 1961, pp 28-32. 9677415

FTD-TT-62-372

Scientific  
Physics (Contd)

Turbulent Flow of Compressed Gas in  
Channels, by G. G. Chernyi, 12 pp.  
RUSSIAN, per, Iz Ak Nauk SSSR,  
Otdel Tekh Nauk, No 6, 1956,  
pp 55-62. 9087646

AEC UCRL Tr-785(L)

Selected Articles From the Russian  
Periodical Iz Ak Nauk SSSR, Otdel  
Tekh Nauk, Mekh i Mash.

No 4, 1960, pp 166, 167. 9665772  
A One-Dimensional Flow of a  
Conducting Gas With a Constant  
Velocity in a Travelling Magnetic  
Field, by Ye. I. Yantovskiy, 3 pp.

FTD-TT-62-331

No 5, 1960, pp 80-87.  
The Equations of Plane Deformation  
of Linear Hardening With Time  
Integral Operators, by M. I.  
Rozovskiy.

\*FTD-TT-62-1039

No 1, 1961.  
Heat Transfer at the Nose of a  
Body Washed by a Radiating Medium,  
by A. N. Rumynskiy, 12 pp,  
(pp 96-101). 9677449

FTD-TT-62-115

Gas Flow in a Channel in the  
Presence of Heat Transfer, by  
I. I. Mezhirov, 10 pp, (pp 102-106).  
9677449

FTD-TT-62-115

Hypersonic Flow Around Thin Blunted  
Bodies, by M. D. Ladyzhevskiy,  
6 pp, (pp 150-151). 9677343

FTD-TT-62-639

No 2, 1961, pp 117-119. 9665786  
The Effect of a Magnetic Field on  
the Flow of a Conducting Gas in a  
Plane Tube in the Presence of Heat  
Transfer Through the Walls, by  
E. P. Zimin, 6 pp.

FTD-TT-62-333

Scientific  
Physics (Contd)

The Luminescence of Crystalline Substances, by V. L. Levshin, 25 pp.  
RUSSIAN, per, Iz Ak Nauk SSSR, Ser Fiz, Vol IX, 1945, pp 355-368.  
9089549

AEC Tr-5110

The Link Between the Dielectric Strength of Gases and Liquids and Their Physicochemical Properties, by A. A. Vorob'yev, A. F. Kalganov, 9 pp.  
RUSSIAN, per, Iz Tomskogo Ordona Trudovogo Krasnogo Znameni Politekhnicheskogo Instituta imeni S. M. Korova, Vol XCI, 1956, pp 103-107.  
9677345

FTD-TT-62-170

Analysis of the Heating of Bodies With Radiant Heat on the Basis of Similarity Theory, by G. P. Boykov, 7 pp.  
RUSSIAN, per, Iz Tomskogo Ordona Trudovogo Krasnogo Znameni Politekhnicheskogo Instituta imeni S. M. Kirova, Vol CI, 1958, pp 42-46.  
9677341

FTD-TT-61-229

The Problem of Increasing the Cubic Component in the Recrystallization Texture of Transformer Steel, by P. D. Izbranov.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Fiz, No 4, 1960, pp 232-233.

BISI 2828

The Effect of the Coherently Reflected Part of a Signal on Its Correlation Properties, by V. A. Checha.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Fiz, No 4, 1961, pp 17-22.

\*FTD-TT-62-1029

A Cyclic Accelerator in Which the Trajectory Is Controlled by a High-Frequency Field, by A. A. Vorob'yev, Ye. S. Kovalenko.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved, Fiz, No 5, 1961, pp 36-38.

\*FTD-TT-62-1036

Scientific  
Physics (Contd)

Heat Transfer From a Granular Layer  
to a Tube Wall in the Presence of  
Internal Heat Sources, by V. A.  
Rastaturin, 6 pp.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved  
SSSR, Khim i Khim Tekh, No 1, 1961,  
pp 138-141. 9677358

FTD-TT-62-111

Heat Transfer at Ribbed Tubular Sur-  
faces Subject to Lengthwise Flow,  
by N. N. Norkin, et al.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Khim i Khim Tekh, No 3, 1961,  
pp 518-519.

U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-163(W)

Experimental Investigation of the Flow  
of the Evaporating Liquid Film on the  
Surface of a Cone in a Gas Stream,  
by V. M. Polyayev.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Nash, No 5, 1960, pp 140-148.

\*FTD-TT-62-1031

Experimental Investigation of Evapora-  
tion of Cooling the Surface of a  
Porous Cone Placed on a High Temper-  
ature Gas Flow, by V. M. Polyayev.  
RUSSIAN, per, Iz Vysshikh Ucheb Zaved,  
Nash, No 7, 1960, pp 149-160.

\*FTD-TT-62-1032

Action of Ionizing Irradiations on  
Vulcanized and Unvulcanized Rubbers,  
by A. S. Kuzminski, et al.  
RUSSIAN, per, Kauchuk i Rezina, No 6,  
1957, pp 12-18.

CSIRO

Reducing the Corrosivity of Extreme  
Pressure (E.P.) Additives Without  
Impairing Their Effectiveness, by  
Yu. S. Zaslavskiy, G. O. Shor,  
R. N. Shneyerova.  
RUSSIAN, per, Khim i Tekh Topliv i  
Masel, No 12, 1961, pp 39-43.

\*FTD-TT-62-1024

Scientific  
Physics (Contd)

Determination of the Critical Rate of Fluidization by Gas Under Pressure,  
by B. B. Chesnokov.  
RUSSIAN, per, Khim Prom, No 11, 1961,  
pp 767-768.

U.K. Atomic Energy  
Authority  
Springfields Tr-82

The Effect of Ion Bombardment on Emission of an Oxide Coated Cathode,  
by I. A. Abroyan.  
RUSSIAN, per, Nauch Tekh Informats Byull Leningrad Politekh Inst, No 3, 1960,  
pp 33-45.

\*FTD-TT-62-1041

Concerning the Study of the Ion-Electron Emission of Metals, by G. M. Batanov,  
N. N. Petrov.  
RUSSIAN, per, Nauchno-Tekh Informatsii Byul Leningrad Politekh Inst, No 9,  
1960, pp 101-107.

\*FTD-TT-62-1019

Turbulent Convection of a Plasma in a Magnetic Field, by B. B. Kadomtsev.  
RUSSIAN, per, Nuclear Fusion, Vol I,  
No 4, 1961, pp 286-308.

\*AERE, Harwell Tr-1641

The Contribution of Soviet Science to the Study of Luminescence, by V. L. Levshin, 28 pp.  
RUSSIAN, per, Optika i Spektroskopiya,  
Vol III, No 5, 1957, pp 417-433.  
9088293

A.C.S.I.L. No 1067

Oxidation of Polypropylene at High Oxygen Pressures, by V. V. Dudorov.  
RUSSIAN, per, Plasticheskiye Massy,  
No 12, 1961, pp 3-7.

\*ACSI I-1644  
ID 2203202

Accelerators of Atomic Particles,  
by V. Veksler, 13 pp.  
RUSSIAN, np, Pravda, 31 Mar 1962, p 4.

JPRS 14273

Scientific  
Physics (Contd)

Bases of the Theory of Magneto-Telluric Profiling, by M. N. Verdichevskiy.  
RUSSIAN, per, Prik Geofiz, No 28,  
1960, pp 70-91.

\*FTD-TT-62-1062

Effect of the Action of an Ultrahigh Frequency Field on the Audio (Aural) Sensitivity During Application of Electrodes in the Zone of Projection of the Aural Zone of the Cortex (Lamella of Temporal Bone), by B. Yu. Sheyvelkhman, 10 pp.  
RUSSIAN, per, Problemy Fiz Akusti, Vol I, No 123, 1949, pp 122-127.  
9677334

FTD-TT-62-491

Identification of Spatial Objects, by V. S. Fayn, 13 pp.  
RUSSIAN, per, Problemy Peredachi Informatsii, No 10, 1961, pp 49-56.  
9665774

FTD-TT-62-750

Problem of the Climatological Computation of Total Radiation Under Conditions of the Complex Topography of Georgia, by A. F. Kotariya, 6 pp.  
RUSSIAN, per, Soobshch Ak Nauk Gruzinskoy SSR, Vol XXVI, No 2, 1961, pp 161-165.

JPRS 14265

Method of Measuring Thermal Conductivity of Ceramic Materials, by I. A. Alperovich, Yu. M. Yofe.  
RUSSIAN, per, Steklo i Keramika, Vol VIII, No 12, 1951, pp 21-23.

CSIRO

High-Speed Combined Camera Tube, by G. M. Khoryak, 15 pp.  
RUSSIAN, per, Tekh Kino i Televideniya, No 10, 1961, pp 51-56. 9665797

FTD-TT-62-574

Scientific  
Physics (Contd)

Optimal Binary Codes for Small Rates  
of Transmission of Information, by  
R. L. Dobrushin, 12 pp.  
RUSSIAN, per, Teoriya Veroyatnostev i  
Yeye Primeneniya, Vol VII, No 2, 1962,  
pp 208-213.

JPRS 14556

Selected Articles From the Russian  
Periodical Teploenergetika.

Vol VII, No 9, 1960, pp 67-71.  
Water and Steam Contents During  
Surface Boiling of Water, by  
P. G. Poletavkin.

NLL M. 4665

Vol VI, 1961, pp 53-57.  
Heat Transfer Unit Resistance of  
Finned Bundles, by N. P. Klitin,  
V. A. Lokshin.

U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-127(.J)

No 7, 1961, pp 57-60. 9665790  
Heat Transfer and Hydraulic  
Resistance During Helical Flow  
of a Fluid in a Tube, by  
M. Kh. Ibragimov, Ye. V. Nomofilov,  
et al, 9 pp.

FTD-TT-62-315

Vol V, No 4, 1962.  
Study of Heat Transfer During the  
Nuclear Boiling of Water in Tubes,  
by G. V. Alekseyev, et al, (pp 74-77).

\*AEC

Concerning Certain Patterns of  
Behaviour of the Transition Zone of  
a Dynamic Two-Phase Layer, by  
M. A. Styrikovich, A. V. Surnov,  
(pp 77-79).

Transactions of the Physics Institute,  
Academy of Sciences USSR, by  
D. V. Skobel'tsyn.  
RUSSIAN, per, Trudy Akademii Nauk SSSR, Fiz  
Inst imeni P. N. Lebedeva, Vol X, 1958,  
175 pp.

\*FTD-TT-62-958

Scientific  
Physics (Contd)

On the Multidimensional Local Limit Theorem for Lattice Distribution, by A. A. Mitalauskas.  
RUSSIAN, per, Trudy Ak Nauk Litovskiy SSSR, Vol II, No 22, 1960, pp 3-24.

\*FTD-TT-62-1015

The Flow Round a Flat Plate of a Supersonic Stream of Ideal Gas in the Presence of Volumetric Evolution of Heat, by I. F. Shakhov, V. A. Frost.  
RUSSIAN, per, Trudy Fiz-Tekh Inst, Izledovaniya po Nekhanike i Prikladnoy Matematike, No 7, 1961, pp 110-124.

\*FTD-TT-62-1049

On the Study of Seismic Effect of Powerful Explosions, by L. A. Utkin, 11 pp.  
RUSSIAN, per, Trudy Gorno Geol Inst Ak Nauk SSSR, Ural Filial, No 54, 1960, pp 125-130. 9093508

AEC UCRL Tr-820(L)

Seismic Effects of Underground Explosion.  
RUSSIAN, per, Trudy Inst Fiz Zemli imeni O. Yu. Shmidta, No 15, 1960, pp 3-108.

AEC IP Tr-871

Dependence of the Binding Properties of the Clinker Minerals on Their Burning Temperature and Crystal Structure, by Yu. M. Butt, V. V. Timashov.  
RUSSIAN, per, Tsement, Vol XXVII, No 2, 1961, pp 17-22.

NLL M. 4768

Theory of Moving Generators and Receivers of Sound, by D. I. Blokhintsev.  
RUSSIAN, per, Uchneye Zapiska Fiz, Book 5, No 134, 1949, pp 134-145.

\*Navy/APL

The Possibility of Measuring Polarization in the Scattering of a Neutron by a Neutron, by O. H. Sitenko, V. F. Kharchenko.  
RUSSIAN, per, Ukrain Fiz Zhur, Vol VI, No 1, 1961, pp 20-23.

\*AEC

Scientific  
Physics (Contd)

The Action of Small Doses of Ionizing Radiation on Physiological Functions,  
by C. G. Kocherezkin, 4 pp.  
RUSSIAN, per, Vest Ak Nauk SSSR,  
No 10, 1961, pp 136-137. 9635787

FTD-TT-62-657

The Coefficient of Resistance of a Solid Particle in a Gas Flow,  
by S. S. Zabrodskiy.  
RUSSIAN, per, Vest Ak Nauk SSSR,  
Ser Fiz Tekh Nauk, No 4, 1956,  
pp 39-50.

NLL M. 4793

Inductance of Sectional Paper Capacitors,  
by G. S. Kuchinskiy, K. N. Irkayeva,  
18 pp.  
RUSSIAN, per, Vest Elektroprom,  
Vol XXXII, No 11, 1961, pp 38-41.  
9093509

U.K. Atomic Energy  
Authority  
Aldermaston, AERE Tr-35

Kinetics of the Removal of Ruthenium Tetra-Oxide From Aqueous Solutions,  
by A. A. Goryunov, et al.  
RUSSIAN, per, Vest Leningrad Univ,  
Ser Fiz Khim, Vol XV, No 10, 1960,  
pp 104-111.

\*U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-134(D)

Investigation of Hydrogen Overvoltage on a Highly Active Smooth Platinum Electrode Under Turbulent Conditions of the Solution, by L. N. Nekrasov.  
RUSSIAN, per, Vest Moskov U, No 5,  
1960, pp 19-24.

\*Navy/NRL

Some Properties of Tantalum Pentoxide I.,  
by A. V. Lapitskiy, Yu. P. Simanov.  
RUSSIAN, per, Vest Moskov Univ, Ser Fiz Matemat i Yestest Nauk, Vol IX,  
No 3, 1954, pp 85-89.

AERE, Harwell Tr-1559

Some Properties of Tantalum Pentoxide,  
by Yu. P. Simanov, A. V. Lapitskiy, et al.  
RUSSIAN, per, Vest Moskov Univ, Ser Fiz Matemat i Yestest Nauk, Vol LI, No 9,  
1954, pp 109-113.

AERE, Harwell Tr-1560

Scientific  
Physics (Contd)

Supersonic Flow Past Axially Symmetric Blunt Bodies With a Detached Shock Wave, by F. V. Shugayev, 10 pp.  
RUSSIAN, per, Vest Mosk Univ, Ser I.  
Matemat Mekh, No 2, 1961, pp 46-53. 9665766

FTL-TT-62-351

Radioactive Isotopes in International Trade, by V. Molodtsov, V. Aksilenko.  
RUSSIAN, per, Vnesh Torg, No 5, 1961, pp 48-51.

AERE, Harwell Tr-1516

Study of the Effect of Plastic Deformation on the Electrical Properties of Alloys of the Fe-Al System, by I. Ya. Dekhtyar, S. G. Litovchenko, R.G. Fedchenko.

RUSSIAN, per, Voprosy Fiz Metal i Metallov, Ak Nauk SSSR, Sbornik Nauch Rabot Inst Metallofiz, No 11, 1960, pp 121-128.

BISI 2832

Action of <sup>90</sup>Sr-<sup>90</sup>Y on Live Khamsa Eggs, by G. G. Polikarpov, V. N. Ivanov.  
RUSSIAN, per, Voprosy Ikhtiologii, Vol I, No 3, (20), 1961, pp 583-589.

\*U.K. Atomic Energy Authority Risley, TRG Inf Ser 166 (W)

Physico-Chemical and Geophysical Conception of Atmospheric Ionization, by Ye. A. Chernyavskiy, 8 pp.  
RUSSIAN, per, Voprosy Kurortolog, Fiz i Lechebnay Fiz Kul'tury, Vol XXVII, No 1, 1962, pp 3-8.

JPRS 14271

Aeroiontophoresis, by S.N. Finogenov, 4 pp.  
RUSSIAN, per, Voprosy Kurortolog, Fiz i Lechebnay Fiz Kul'tury, Vol XXVII, No 1, 1962, pp 8-11.

JPRS 14271

Experience in the Use of an Aerophotarium in a Medical Institution, by S. A. Yagunov, L. N. Startseva, 4 pp.  
RUSSIAN, per, Voprosy Kurortolog, Fiz i Lechebnay Fiz Kul'tury, Vol XXVII, No 1, 1962, pp 16-20.

JPRS 14271

Scientific  
Physics (Contd)

Internal Stresses in Coatings, I. -  
III, by A. T. Sanzharovskiy.

RUSSIAN, per, Vysokomolekulyarnye  
Soyedineniya, Vol II, No 11, 1960,  
pp 1698-1714.

\*AERE, Harwell Tr-1640

Quadrupolar and Dipolar Gamma Radiation  
of Nuclei, by A. Migdal, 14 pp.

RUSSIAN, per, Zhur Eksper i Teoret Fiz,  
Vol XV, 1945, pp 81-88. 9093511

AEC UCRL Tr-822(L)

Method for Investigating the Secondary  
Emission Upon Bombardment of the Con-  
ductors With Ions, by U. A. Arifov,  
A. Kh. Ayukhanov, S. V. Starodubtseva.  
RUSSIAN, per, Zhur Eksper i Teoret Fiz,  
No 6, 1954, pp 714-722. 9093444

AEC Tr-5066

Study of the Compatibility of Three-  
Component Polymer Mixtures, by  
I. U. Mishustin, V. I. Alekseyenko.  
RUSSIAN, per, Zhur Fiz Khim, Vol XXXIII,  
1959, pp 757-762.

CSIRO

Reaction of Hydrogen With Oxygen in Sil-  
ent Electric Discharge, V. Kinetic  
Analysis of the Process According to  
Equations of Irreversible Consecutive  
Reactions of the First Order, by  
I. A. Semenikhin, N. I. Kobozev,  
Ye. N. Pitskhelauri.  
RUSSIAN, per, Zhur Fiz Khim, Vol XXXVI,  
No 1, 1962, pp 72-80.

\*FTD-TT-62-951

Detonation of Mixed Explosive Substances,  
by I. M. Voskoboinikov, G. S. Sosnova,  
8 pp.  
RUSSIAN, per, Zhur Prik Mekh i Tekh Fiz,  
No 4, 1961, pp 133-135. 9093513

AEC Tr-5100

Scientific  
Physics (Contd)

Investigating Resistance and Heat Exchange for Supersonic Air Flow in Axially Symmetrical Ducts in the Presence of a Longitudinal Pressure Gradient, by A. I. Leont'yev, A. N. Oblivin, P. N. Romanenko.  
RUSSIAN, per, Zhur Prik Mekh i Tekh Fiz, No 5, 1961, pp 16-25.

\*FTD-TT-62-1044

Flow of Density of Acoustical Energy in a Moving Medium, by L. A. Chernov.  
RUSSIAN, per, Zhur Tekh Fiz, Vol XVI, No 6, 1946, pp 733-736.

Dept of Navy/  
JHU/APL TG 230-T291

Stretching of Polymers Under Polarized Infra-Red Light, by V. N. Nikitin, M. V. Vol'kenshtein, et al.  
RUSSIAN, per, Zhur Tekh Fiz, Vol XXV, 1955, pp 2486-2491.

CSIRO

Calculation of the Electrical Conductivity of Alkali Metal and Copper Vapor, by V. P. Ignatenko.  
RUSSIAN, per, Zhur Tekh Fiz, Vol XXXII, No 1, 1962, pp 129-132.

\*FTD-TT-62-1020

On Asymptotic Lawfulness in the Theory of the Slowing-Down of Neutrons, by M. V. Maslenikov.  
RUSSIAN, per, Zhur Vychislitel'noy Matemat i Matematich Fiz, Vol I, No 6, 1961, pp 1136-1139.

\*FTD-TT-62-1045

Computating an Axisymmetric Isentropic Flow of a Real Gas, by O. N. Katskova, A. N. Krayko.  
RUSSIAN, per, Zhur Vychislitel'noy Matemat i Matematich Fiz, Vol II, No 1, 1962, pp 125-132.

\*FTD-TT-62-1057

Scientific  
Physics (Contd)

Bolometric Device for Studying Radiation,  
by A. F. Mal'yev, L. G. Kremenchugskiy.  
RUSSIAN, Patent No 136,070, Application  
No 640884/26, 12 Oct 1959, pp 1, 2.

\*FTD-TT-62-1110

The Direct Conversion of Thermal Into  
Electrical Energy, by I. K. Vul'fel'dt,  
4 pp.  
RUSSIAN, Patent No 141,560, (68179/24),  
15 Dec 1960. 9677347

FTD-TT-62-12

Production of Artificial Radioisotopes  
in Yugoslavia, by Cedomir Teofilovski,  
15 pp.  
CROATIAN, per, Tehnika, Vol XVII, No 5,  
1962, pp 837-842.

JPRS 14524

Calculation of Radiation Patterns of  
Antenna Systems, by M. Kozlik,  
J. Kadlec.  
CZECH, per, Slaboproudý Obzor, Vol XXII,  
No 9, 1961, pp 542-545.

\*FTD-TT-62-1061

The Production and Measurement of Con-  
stant High Temperatures, Up to 7000° K,  
by J. A. Smit, 170 pp.  
DUTCH, thesis, Het Verkrijgen en Meten  
van Constante Hoge Temperaturen Tot  
ca. 7000° K., 1950.

Natl Bu of Standards

The Effect of Ionising Radiation on  
Proteins, by R. Braams.  
DUTCH, per, Atoomenergie, Vol IV, No 3,  
1962, pp 47-58.

\*AERE, Harwell Tr-1652

Research in the Paper Field Today, by  
L. Nordman.  
FINNISH, per, Paperi Ja Puu, Vol XXXIX,  
No 9, 1956, pp 401, 403-408.

CSIRO

Interference, by M. Francon,  
120 pp.  
FRENCH, bk.

\* IP

Scientific  
Physics (Contd)

The Behavior of Rare Gases in Solids  
at High Temperature, by J. Blin, 47 pp.  
FRENCH, rpt, CEA-1444, 1960.

AEC HW-Tr-34

Accuracy of Photographic-Plate Calibration  
in Spectrographic Analysis, Part I. Com-  
parison of the Accuracy of Different  
Calibration Methods, by R. Schmidt.

FRENCH, rpt, Deuxieme Congress du Group-  
ment pour l'Avancement des Methodes  
d'Analyses Spectrographique des Produits  
Metallurgiques, Paris, 1948, pp 137-144.

CSIRO

On the Frequency Weighting of Noise  
Spectra, by E. Lubke.  
FRENCH, per, Acustica, Vol IX, 1959,  
pp 243-246.

CSIRO

Aqueous Reprocessing of Uranium by Amine  
Extraction, by A. Chesne, 23 pp.  
FRENCH, per, Advanced Course on Fuel  
Elements for Water Cooled Power Reactors,  
Vol III, Section II. 9093443

AEC Tr-5014

Reactivity in the Solid State of Lime  
and Calcium Carbonate in Ceramic Pastes  
Fired at a Temperature Below 1000°C, by  
M. Nemereit.  
FRENCH, per, Bull Soc Francaise de  
Ceramique, No 29, 1955, pp 41-52.

CSIRO 3168

Determination of the Mass of Charged  
Particles in Nuclear Emulsions by the  
Enumeration of Voids, by G. Kayas.  
FRENCH, per, Comptes Rendus,  
Vol CCXXXVIII, 1954, pp 2153-2155.

CSIRO

Scientific  
Physics (Contd)

On the Choice of the Parameter Which Is Most Sensitive to the Variation of the Speed of the Particles Inside the Nuclear Emulsion, by J. Claret, Tsai-chu.

FRENCH, per, Comptes Rendus, Vol CCXLIV, 1957, pp 2381-2383.

CSIRO

Adsorption and Isotopic Dilution of Phosphate Ions in Contact With Ferric Hydroxides, by R. Blanchet.

FRENCH, per, Comptes Rendus, Vol CCXLVIII, 1959, pp 1028-1031.

CSIRO 4779

Natural Ageing Tests and Accelerated Tests (Artificial Ageing), Action on Vinyl Derivatives, by F. Chevassus.

FRENCH, per, Industrie des Plastiques Moderne, Vol IX, No 7, 1957, pp 38-42.

CSIRO

Methods of Measurement of Masses of Charged Particles Recorded in Nuclear Emulsions, by A. Orkin-Lecourtois Hoang.

FRENCH, per, Journal de Physique et le Radium, Vol XVI, No 3, 1955, pp 165-225.

CSIRO

Intensity and Size of Rays or Bands of Absorption in Infra-Red, by J. Vincent-Geisse.

FRENCH, per, Journal de Physique et le Radium, Vol XVII, 1956, pp 63-71.

CSIRO

Scattering of Polarized Protons by a Target of Polarized Protons, by J. Raynal, 28 pp.

FRENCH, per, Nuclear Physics, Vol XXVIII, 1961, pp 220-243. 9089554

AEC Tr-5084

Multiple Thermal Spikes Produced by Irradiation in Metals, by A. Corciovei, D. Grecu.

FRENCH, per, Revue de Physique, Vol VI, No 3, 1961, pp 363-383.

\*AERE, Harwell Tr-1637

Scientific  
Physics (Contd)

Electron Diffraction Study of Thin Layers  
of Silver Oxidized in the Reactor and  
Thermally, by I. Teodorescu, G. Glanz.  
FRENCH, per, Revue de Physique, Vol VI,  
No 4, 1961, pp 483-489.

\*AERE, Harwell Tr-1648

Specific Heat of Glasses, Part II -  
Differential Thermal Analysis, by  
M. Prod'homme.  
FRENCH, per, Verres et Refractaires,  
Vol XIII, No 1, 1959, pp 3-16.

CSIRO

Methods and Uses of Mass Spectroscopy,  
by Heniz Ewald, Heinrich Hintenberger.  
GERMAN, bk, Methoden und Anwendungen  
der Massenspektroskopie, 1953,

AEC Tr-5080

The Formation and Diffusion of Kinks  
as the Fundamental Process of Dis-  
location Movement in Internal Friction  
Measurements, by A. Seeger, P. Schiller,  
22 pp.  
GERMAN, per, Acta Met, Vol X, 1962,  
pp 348-357.

AEC Tr-5107

Flame Photometry. I, by G. Pietzka,  
H. Chun, 18 pp.  
GERMAN, per, Angewandte Chemie,  
Vol LXXI, No 8, 1959, pp 276-283.  
9088297

A.C.S.I.L. No 1333

Selected Articles From the German  
Periodical Annalen der Physik.

Vol XLI, No 4, 1913, pp 337-380.  
9093515  
The Molecular Air Pump, by  
W. Gaede, 35 pp.

AERE, Harwell Tr-892

Vol XXIX, No 5, 1937, pp 605-635.  
On the Magnetic After Effect in  
Carbonyl Iron, by Gustav Richter.

\*AEC

Scientific  
Physics (Contd)

Selected Articles From the German  
Periodical Annalen der Physik.  
(Contd)

Vol XL, No 5, 1941, pp 579-600.  
Theoretical and Experimental  
Contributions to Schottky Piles,  
by H. Fetz.

\*FTD-TT-62-1101

Vol XLI, No 5, 1942, pp 501-519.  
Probe Experiments on Stabilized  
Mercury-Vapor Arcs, by Gottfried  
Wehner.

\*FTD-TT-62-1102

Vol XI, No 6, 1953, pp 203-224.  
The Graphite Arc as Spectrophotometric  
Standard of Radiation Density in the  
Range From 0.25 to 1.8, by J. Euler,  
28 pp.

Navy Tr 3189/  
NRL 894

Neutron-Activation Analysis and Its  
Application to Steel, by W. Reiser,  
M. Schneider.  
GERMAN, per, Archiv Eisenhuttenwesen,  
Vol XXXII, No 1, 1961, pp 31-38.

HB 5409

Method of Measuring the Explosive  
Strength of Metals and Alloys and  
Their Behavior Under Shock-Wave  
Stresses, by E. Schmidtmann,  
D. Springorum, H. Schenck.  
GERMAN, per, Archiv Eisenhuttenwesen,  
Vol XXXIII, No 4, Aug 1962, pp 241-250.

HB 5638

Standards Converter Using the Vidicon  
Camera, by W. Dillenburger.  
GERMAN, per, Archiv der Elektrischen  
Übertragung, Vol XII, No 5, 1958,  
pp 209-224.

CSIRO

Scientific  
Physics (Contd)

Transient Temperature Distribution in  
Cylindrical and Plate Type Fuel  
Elements After Reactor Shutdown, by  
L. Boswirth.  
GERMAN, per, Atomkernenergie, Vol VI,  
No 9, 1961, pp 360-363.

\*U.K. Atomic Energy  
Authority  
Risley, TRG Inf  
Ser-148(R)

The Determination of Epithermal  
Neutron Spectra by Means of Resonance  
Probes (Sandwich Method), by  
G. Ehret.  
GERMAN, per, Atompraxis, Vol VIII,  
No 11, 1961, pp 393-400.

\*AERE, Harwell Tr-1635

Analysis of Simple and Complex Gamma  
Spectra, by Th. Schneider, H. Munzel,  
17 pp.  
GERMAN, per, Atompraxis, No 11, 1961,  
pp 412-419.

AEC Tr-5102

Measurement Sensitivity and Error in  
Thickness and Density Measurement With  
Radioactive Isotopes by the Transmission  
Method, by W. Dietzsch.  
GERMAN, per, Atompraxis, Vol VIII,  
No 4, 1962, pp 129-133.

\*AERE, Harwell Tr-1644

The Classification of Fine Grained  
Solids, by R. T. Hukki, 32 pp.  
GERMAN, per, Aufbereitungs Tech,  
Vol I, 1960, pp 509-517.

AEC NP Tr-877

Theoretical and Photoelastic Investi-  
gation of a Tunnel-Tube Burdened With  
Deranged Zones Along Its Longitudinal  
Direction, by G. Sonntag.  
GERMAN, per, Bauingenieur, Vol XXXI,  
No 11, 1956, pp 408-412.

CSIRO

Determination of Data on a Plasma  
Ray Escaping Into Free Atmosphere,  
by W. Neumann.  
GERMAN, per, Beitrage Aus der Plasma  
Physik, Vol I, No 2, 1960-1961,  
pp 119-125.

\*FTD-TT-62-941

Scientific  
Physics (Contd)

Changes in State in Isothermal  
Argon-Plasma, by F. Kuemmel, 12 pp.  
GERMAN, per, Beitrage Aus der Plasma  
Physik, Vol I, No 4, 1960-1961,  
pp 236-244. 9677450

FTD-TT-62-438

On the Binard Flow in Aerosols, by  
H. Tippelskirch.  
GERMAN, per, Beitrage Zur Physik der  
Atmosphere, Vol XXIX, No 3, 1957,  
pp 219-233.

\*AFCRL Res Lib

Quadrupole Radiation, by A. Rubinowicz,  
J. Blaton.  
GERMAN, per, Ergebnisse der Exakten  
Naturwissenschaften, Vol XI, 1932,  
pp 176-218.

AERE, Harwell Tr-1536

On an Optical Method of Measuring  
Internal Threads, by H. Haas.  
GERMAN, per, Feingeraete Technik,  
Vol VII, No 12, 1958, pp 548-550.

CSIRO

Method for the Combined Microscopic  
and X-Ray Examination of Corns in  
Glass, by N. Koppen, O. Florke.  
GERMAN, per, Glastechnische Berichte,  
Vol XXX, No 5, 1957, pp 182-186.

CSIRO

Infra-Red Bands in Freshly Prepared  
and Weathered  $B_2O_3$  Glass, by  
R. Bruckner, H. Scholze.  
GERMAN, per, Glastechnische Berichte,  
Vol XXXI, 1958, pp 417-422.

CSIRO

Problems of Industrial Isotope Measure-  
ment Techniques. I, by E. Schurz.  
GERMAN, per, Isotopentechnik, Vol I,  
No 5/6, 1960, pp 136, 137.

\*AERE, Harwell Tr-1638

**Scientific  
Physics (Contd)**

The Dependence of the Electrical Resistance of Nickel Steels on Composition, Temperature and Heat Treatment, by F. Ribbeck, 15 pp.  
GERMAN, per, J. Physik, Vol XXXVIII, No 39, 1926, pp 772-787. 9088295

A.C.S.I.L. No 1347

On the Identification of Plastics Materials and Resins and Articles Made of Them by Means of Infra-Red Spectra, by D. Hummel.  
GERMAN, per, Kunststoffe, Vol XLVI, No 10, 1954, pp 442-450.

CSIRO

Zirconium and Zirconium Alloys for Water Cooled Reactors, by L. Bangert, K. Hennemann.  
GERMAN, per, Metall, Vol VII, 1960, pp 704-710.

\*U.K. Atomic Energy Authority  
Risley, TRG Inf Ser 100(C)

Electron-Biprism Interferences With Widely Separated Coherent Particle Clusters, by G. Mollenstedt, W. Bayh.  
GERMAN, per, Die Naturwissenschaften, No 48, 1961, p 400.

\*FTD-TT-62-1004

Photography in the Service of the Tensometry of Polarisation Optics, by R. V. Baud.  
GERMAN, per, Naturwissenschaftliche Rundschau, Apr 1954, pp 151-155.

CSIRO

An Electron-Interference Microscope, by G. Mollenstadt, R. Buhl.  
GERMAN, per, Physik Blatter, No 13, 1957, pp 357-360.

\*FTD-TT-62-1000

Expansion of the Measuring Range of an Electrostatic Mass Spectrometer, by R. Behrisch, E. Blauth, F. Melzner, 15 pp.  
GERMAN, per, Physikalische Verhandlungen, Vol XII, 1961, pp 224.  
9093518

AEC Tr 5092

Scientific  
Physics (Contd)

The Physical Relationships Between Heat-Transfer Coefficient, Radiation Exchange, Temperature and Transpiration of a Leaf, by K. Raschke.  
GERMAN, per, Planta, Vol LVIII, No 2, 1956, pp 200-237.

CSIRO 3452

New Findings in the Field of Dust Extraction by Sound, by R. Jahn.  
GERMAN, per, Radex Rundschau, No 7, 1955, pp 526-631.

CSIRO

Volatilisation of Fluorine From an Opaque Glass in Dependence on Temperature and Time, by F. Jochmann.  
GERMAN, per, Sprechsaal, Vol XC, 1957, pp 210-212.

CSIRO

Analysis of Irregularity of Yarns, Rovings, and Slivers by Means of the Wave-Length Spectrum, by E. Felix.  
GERMAN, per, Textil-Rundschau, Vol X, No 1, 1955, pp 1-9.

CSIRO 4753

Measurement of Pressure With Pirani-Manometer, by Klaus-Dieter Mielenz.  
GERMAN, per, Z. fuer Angewandte Physik, Vol VI, 1954, pp 101-104.

CSIRO

Investigation of Particle Size and Lattice Distortion by X-Ray Interferences, by U. Hauk, C. Hummel.  
GERMAN, per, Z. fuer Metallkunde, Vol XLVII, Apr 1956, pp 254-260.

\*U.K. Atomic Energy Authority  
Risley, TRG Inf  
Ser 107(C)

Ambipolar Iffusion From the Positive Pile, by M. Pahl.  
GERMAN, per, Z. fuer Naturforschung, Vol XIIa, No 8, 1957, pp 632-642.

\*FTD-TT-62-1073

Scientific  
Physics (Contd)

Selected Articles From the German  
Periodical Z. fuer Physik.

Vol III, No 5, 1920, pp 417-421.  
An Addendum to My Paper "A Direct  
Measurement of Thermal Molecular  
Velocity", by O. Stern.

AERE, Harwell Tr-1514

Vol XC, 1934, pp 232-248.  
The Probe Characteristics of the  
Discharges in Gases of High  
Pressures, by K. Sommermeyer.

\*FTD-TT-62-1100

No 145, 1956, pp 377-397.  
Observations and Measurements in  
Biprismatic Interferences by  
Means of Electron Waves, by  
G. Mollenstedt, H. Duker.

\*FTD-TT-62-999

No 155, 1959, pp 395-412.  
Interference Microscopy With  
Electron Waves, by R. Buhl.

\*FTD-TT-62-1001

No 158, 1960, pp 35-38.  
Coherent Partition of an Electron  
Beam by Means of Magnetic Fields,  
by E. Krimmel.

\*FTD-TT-62-1003

No 159, 1960, pp 397-404.  
Anti-Parallel Weiss's Sphere as  
Biprism for Electron Interference,  
by H. Boersch, H. Hamisch, D. Wohlleben.

\*FTD-TT-62-1002

Vol CLXVI, 1962, pp 494-503.  
The Statistics of the Localized and  
Non-Localized Spin Deviations in the  
Spin-Wave Theory, by D. Frank.

\*AERE, Harwell Tr-1642

Scientific  
Physics (Contd)

Infrared Proper Vibrations of Binary Oxides, BeO, MgO, CaO, ZnO, by Sibylle Tolksdorf, 26 pp.  
GERMAN, per, Z fuer Physikalische Chemie, Vol CXXXII, 1928, pp 161-184.  
9093527

AEC UCRL Tr-795(L)

Mechanical Stresses in the Formation of Oxide Layers, by Walther Jaenicke, Siegiried Leistikow.  
GERMAN, per, Z.fuer Physikalische Chemie, Vol XV, 1958, pp 175-195.

\*AEC

Intense Light Sources for the Vacuum Ultraviolet, by F. J. Comes, E. W. Schlag, 8 pp.  
GERMAN, per, Z fuer Physikalische Chemie, Vol XXI, 1959, pp 212-223.

AEC SCL-T-416

Tasks, Organization, and Regulations of Radiation Protection, by Janos Bonta, 10 pp.  
HUNGARIAN, per, Nepegeszsegugy, Vol XLIII, No 4, 1962, pp 97-101.

JPRS 14260

Study of Heavy Mesons Stopping in the Photographic Emulsions. Part II.  
Method of Estimation of Mass by Grain Density-Residual Track, by T. F. Hoang.  
ITALIAN, per, Nuovo Cimento, Vol I, No 3, 1955, pp 186-199.

CSIRO

Study of Heavy Mesons Stopping in Photographic Emulsions, by T. F. Hoang, et al.  
ITALIAN, per, Nuovo Cimento, Vol X, 1955, pp 172-185.

CSIRO

Treatment of Radioactive Waste With Ion Exchange Membrane Electrodialyzer, by Masukuni Ito, Mutsumi Nishiodi.  
JAPANESE, rpt, JAERI-1012, 1960.

AEC Tr-5079

Scientific  
Physics (Contd)

Selected Articles From the Japanese  
Periodical Nippon Genshiryoku  
Gakkaishi, Vol II, 1960.

A Method of Analysis for Reactor  
Kinetics, by A. Takeda, (pp 175-181).  
9093500

AERE, Harwell Tr-888

Investigation on Stability of a  
Boiling Heavy Water Reactor, by  
Hiroshi Nishihara, Hideaki  
Nishihara, (pp 451-459).

AEC Tr-5078

Two-Group Calculation of Caputare  
Gamma-Rays From Infinite Slab,  
by Noboru Hokkyo, Mitsuki Katazume,  
(pp 474-477).

AEC Tr-5077

Radiation Damage to TBP/Kerosene  
Solvent Effect on Behaviors of  
Fission Products and Nitric Acid,  
by Takehiko Ishihara, Takeshi  
Tsujino, Yutaka Yamamoto, ( pp 659-670).

AEC Tr-5071

The Stabilization of Suspensions of  
Aluminum, by A. A. Shmits, L. K. Lepin.  
LATVIAN, per, Vesti Latvian PSR, Zinatnu  
Ak, No 1, 1952.

NLL M. 3604

Molecular Theory of Light Scatter by  
Multi-Component Systems, by S. Kielick.  
POLISH, per, Acta Physica Polonica,  
Vol XIX, No 5, 1960, pp 573-597.

\*FTD-TT-62-980

Numerical Methods in Gas Dynamics,  
by A. A. Dorodnitsyn.  
POLISH, per, Archiwum Mechaniki  
Stosowanej, Vol XII, No 1, 1960, pp 14-27.

\*FTD-TT-62-979

Radiochemical Procedures: Work With Radio-  
active Isotopes, by Ivan Draganic,  
Olga Gal, Milorad Radotic.  
SERBO-CROATIAN, bk, Radiochemiski  
Praktikum: Rad sa Radioaktivnim  
Izotopima, 1959, 499 pp.

AEC Tr-4499

Scientific  
Space Research

Means to Develop Space Microbiology,  
by N. Zhukov-Verezhnikov, 7 pp.  
RUSSIAN, np. 9665800

FTD-TT-62-600

Artificial Satellites of Mars, by  
I. S. Shklovskiy, 6 pp.  
RUSSIAN, np, Komsomol'skaya Pravda,  
1 May 1959. 9677382

FTD-TT-62-488

Cosmonauts, by Ye. Petrov, 42 pp.  
RUSSIAN, np, Krasnaya Zvezda,  
6-27 Feb 1962, 9677423

FTD-TT-62-728

Cosmonauts, by Ye. Petrov, 13 pp.  
RUSSIAN, np, Krasnaya Zvezda,  
4-7 Mar 1962. 9677437

FTD-TT-62-726

From Running and Flying Missiles to  
Space Rockets, by N. Balakin.  
RUSSIAN, per, Kryl'ya Rodiny, 1959,  
p 18.

\*FTD-TT-62-1006

Selected Articles From the Russian  
Periodical Nauka i Zhizn.

No 4, 1961, pp 8-11. 9665795  
The Launching Took Place in  
February...., by V. G. Demin,  
13 pp.

FTD-TT-62-200

No 9, 1961. 9665792  
From the Window of an Interplanetary  
Station, by V. D. Davydov, 7 pp.  
Hypoxia, (Part II), by  
N. Gurovskiy, 4 pp.

FTD-TT-62-185

No 10, 1961, pp 63, 64.  
Solar Batteries of the Future,  
by M. Koltun.

\*FTD-TT-62-972

Cosmic Explorers, by A. Emme, 3 pp.  
RUSSIAN, np, Sovet Rossiya, 20 Oct 1960.  
9665761

FTD-TT-62-602

Scientific  
Space Research (Contd)

On the Observations of Artificial Earth Satellites, by A. A. Gurshteyn.  
RUSSIAN, per, Trudy Inst Inzhenerov Geodezii, Aerofotoyemki i Kartografi, No 40, 1960, pp 103-113.

\*FTD-TT-62-975

Ballistic Aircraft of the Future, by A. Shibanov.  
RUSSIAN, per, Znaniye Sila, No 12, 1958, p 19.

\*FTD-TT-62-1005

On the Threshold of New Discoveries, by D. D. Ivanenko.  
RUSSIAN, per, Znaniye-Sila, No 12, 1961, pp 7-10.

\*FTD-TT-62-964

Electron-Density Measurements in the Ionosphere by Means of Rockets, by Karl Rawer, 12 pp.  
GERMAN, per, Raketentechnik und Raumfahrtforschung, Vol V, No 4, 1961, pp 117-121. 9677440

FTD-TT-62-208

The Condition and Variations of the Upper Atmosphere According to Satellite Observations, by H. K. Paetzold, 13 pp.  
GERMAN, per, Raketentechnik und Raumfahrtforschung, Vol V, No 4, 1961, pp 121-125. 9677440

FTD-TT-62-208

Space - Man - Technology, by Nagy Erno, 16 pp.  
HUNGARIAN, per, Technika, No 8/9, 1962, 4 pp. 9677409

FTD-TT-62-436

Rocket Weapons or Aircraft, by V. Soltyk.  
POLISH, per, Technike Lotnicza, No 1/2, 1961, pp 2-5.

\*ACSI I-1679  
ID 2203212

Man in Space, by Viktor Bubanj.  
SERBO/CROATIAN, bk, Covjek u Prostoru, Naprijed, Zagreb, 1960, pp 223, 224.

\*FTD-TT-62-1112

Scientific  
Miscellaneous

In a World of Seven Elements, by  
M. V. Vasil'yev, K. P. Stanyukovich,  
254 pp.  
RUSSIAN, bk, V Mire Stikhiy, Moscow,  
1961.

\*FTD-TT-62-960

Present Status and Future Prospects  
for Growth of the Scientific Activity  
of Affiliates and Institutes of the  
Academy of Sciences USSR Transferred  
to the State Committee for Coordination  
of Scientific Research of the Council  
of Ministers RSFSR, by V. O. Ruzhitskiy,  
7 pp.  
RUSSIAN, per, Byull' Tekh-Ekon Informatsii,  
No 12, 1961, pp 80-83.

JPRS 14240

Experience With Rationalization of  
Sport Clothes for Skiers and Racers  
[Ski-Racers], by A. A. Minkh,  
Yu. V. Vadkovskaya, 6 pp.  
RUSSIAN, per, Gig i San, Vol XXVII,  
No 3, 1962, pp 40-45.

JPRS 14345

Records of a Winged Youngster, by  
D. Pipko.  
RUSSIAN, np, Izvestiya, No 56,  
7 Mar 1962, p 6.

\*FTD-TT-62-1079

Coordination of Scientific Research,  
by K. N. Rudnev, 9 pp.  
RUSSIAN, np, Izvestiya, 6 Apr 1962,  
pp 1, 3.

JPRS 14349

Urgent Problems of Structural  
Linguistics, by S. K. Shaumyan, 15 pp.  
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel  
Litera i Yazyka, Vol XXI, No 2,  
Mar/Apr 1962, pp 103-111.

JPRS 14252

Scientific  
Miscellaneous (Contd)

The First Scientific Conference of  
Young Scientists of the Institute  
of Experimental Biology and Medicine  
of the Siberian Division of the  
Academy of Sciences USSR, by  
V. V. Melekhov, V. Yu. Ostrovskiy,  
et al, 6 pp.  
RUSSIAN, per, Iz Sibir Otdel Ak Nauk  
SSSR, No 1, 1962, pp 111-113.

JPRS 14532

Main Factors in Technical Progress,  
6 pp.  
RUSSIAN, per, Klubnyy Kalendar',  
No 1, Jan/Jun 1962, pp 46, 47.

JPRS 14337

Scientific Prospects by Ye. K. Fedorov,  
5 pp.  
RUSSIAN, np, Moskovskaya Pravda,  
No 247(12687), 17 Oct 1961, pp 3, 4.

JPRS 14240

Some Remarks Concerning Recent  
Works of S. Mattson, by A. Rode.  
RUSSIAN, per, Pochvovedeniye, No 4,  
1938, pp 595-605.

CSIRO 3911

Specific Leadership for Scientific  
Institutions, by G. Popov, 9 pp.  
RUSSIAN, np, Pravda, 28 Apr 1962, p 2.

JPRS 14253

Bibliography as an Aid to Industrial  
Production, by M. P. Gastfer.  
RUSSIAN, per, Sovet Bibliografiya,  
No 6, 1959, pp 10-21.

NLL M. 4799

Utilization of Mathematical and  
Cybernetic Methods in Pedagogical  
Research, by L. B. Itel'son, 15 pp.  
RUSSIAN, per, Sovet Pedagogika,  
No 4, 1962, pp 45-55.

JPRS 14383

**Scientific  
Miscellaneous (Contd)**

Selected Articles From the Russian  
Periodical Tekhnika Molodezhi.

JPRS 14354

No 10, 1961.

Automatic Machines and Life, by  
A. N. Kolmogorov, 9 pp.

No 11/12, 1961.

Automation of Mental Work, by  
N. G. Bruyevich, 14 pp.

No 12, 1961.

It is Possible to Derive Equations  
of Health, by A. N. Kolmogorov,  
13 pp.

No 1, 1962.

We Are Discussing the Problems  
of Cybernetics Today, by  
E. Kol'man, 12 pp.

No 2, 1962.

We Are Discussing the Problems  
of Cybernetics Today, by  
P. Kuznetsov, 9 pp.

A Living Being and a Technical  
Device, by I. I. Artobolevskiy,  
A. Ye. Kobrinskiy, 8 pp.

No 3, 1962.

Cybernetics -- To the Service of  
Communism, by A. Berg, 8 pp.

No 4, 1962.

Cybernetics -- To the Service of  
Communism, by A. Berg, 10 pp.

Cybernetics, by N. Wiener, 6 pp.

News of Lithuanian Science, by

S. Mal'dzhynate, 17 pp.

RUSSIAN, per, Trudy Akademii Nauk Litowskoy  
SSSR, Ser C, No 1 (24), 1961, pp 239-249.

JPRS 14241

**Scientific  
Miscellaneous (Contd)**

Scientific Councils - A New Form of  
Science Administration, 9 pp.  
RUSSIAN, per, Vest Ak Nauk SSSR, No 2,  
1962, pp 3-8.

JPRS 14253

Technical Progress and Tasks of  
Scientific Information, by  
A. I. Mikhailov, 10 pp.  
RUSSIAN, per, Vest Ak Nauk SSSR, No 2,  
1962, pp 29-34.

JPRS 14253

Role of Science in Building the Material-  
Technical Basis of Communism, by  
A. B. Reznyakov, 9 pp.  
RUSSIAN, per, Vest Ak Nauk Kazakh SSR,  
No 2, (203), Feb 1962, pp 3-9.

JPRS 14253

The Problem Laboratory Stimulates  
Major Creative Work, by A. A. Vorob'yev.  
RUSSIAN, per, Vest Vysshey Shkoly, No 8,  
1960, pp 48-51.

\*FTD-TT-62-955

Cybernetics and Problems of Work  
Psychology, by L. B. Itel'son, 37 pp.  
RUSSIAN, per, Voprosy Filosofii,  
No 4, 1962, pp 32-46.

JPRS 14297

Machine Deciphering of Mayan Manuscripts,  
by Yu. V. Knorozov, 14 pp.  
RUSSIAN, per, Voprosy Yazykoznanija,  
Vol XI, No 1, Jan/Feb 1962, pp 91-99.

JPRS 14318

Participation of Georgian Science in  
Creation of the Material-Technical  
Basis of Communism, by E. Andronikashvili,  
6 pp.  
RUSSIAN, np, Zarya Vostoka, No 269 (11292),  
24 Nov 1961, p 3.

JPRS 14240

Science and Life, 3 pp.  
RUSSIAN, np, Zarya Vostoka, No 274 (11297),  
30 Nov 1961, p 1.

JPRS 14240

Scientific  
Miscellaneous (Contd)

Time of Greater Velocities, by  
S. Khetaguri, 5 pp.  
RUSSIAN, np, Zarya Vostoka, 2 Dec 1961,  
p 2. 9677342

FTD-TT-62-408

50th Anniversary of the Turkestan  
Entomological Station, by Ye. N. Ivanov,  
4 pp.  
RUSSIAN, per, Zashchita Rasteniy ot  
Vrediteley i Bolezney, Vol VI, No 12,  
1961, pp 52-54.

JPRS 14272

The Use of Punched Cards in Industrial  
and Research Laboratories (Survey), by  
G. G. Vorob'yev, 13 pp.  
RUSSIAN, per, Zavodskaya Laboratoriya,  
Vol XXVIII, No 3, 1962, pp 316-323.

JPRS 14468

Chemistry Faculties of the Har'kov  
Polytechnic Institute Imeni  
V. I. Lenin (On the Institute's  
75th Anniversary), 6 pp.  
RUSSIAN, per, Zhur Prik Khim, Vol XXXIV,  
No 7, 1961, pp 1645-1648.

JPRS 14242

Cybernetics in Nature, by V. Kovalevskiy,  
10 pp.  
RUSSIAN, per, Znaniye -- Sila, Vol XXXVII,  
No 4, 1962, pp 36-38.

JPRS 14467

A Scientific Study of the Policy of  
Activity Pursuing Technology, 6 pp.  
CHINESE, per, Hung-ch'i, 1 Jun 1962,  
p 1.

JPRS 14431

The 22nd CPSU Congress and Bases for  
the "Renovation", by Jean Terfve, 20 pp.  
FRENCH, pamphlet, Le XXII Congres du  
Parti Communiste de l'U.R.S.S. et les  
Bases du "Renouveau", No 2, May 1962,  
pp 1-22.

JPRS 14548

Scientific  
Miscellaneous (Contd)

The Problem of Ultrasound, by  
Pierre Bugard, 16 pp.  
FRENCH, per, Le Concours Medical,  
Vol V, No 21, 1960, pp 2645-2650.

JPRS 14567

Investigation on Passport Forgeries  
With the Simplest Means, by  
W. Hofmann, 23 pp.  
GERMAN, per, Kriminalistik, May 1962,  
pp 208-214.

JPRS 14485

Nature, Man, and Technology, by  
T. Jakutis, 3 pp.  
POLISH, np, Czerwony Sztandar,  
No 85, 11 Apr 1962, p 3.

JPRS 14408

Scientific Research and Popularizing  
Science at the University of Hanoi,  
by Le Van Thiem, 10 pp.  
VIETNAMESE, per, Tin Tuc Hoat Dong  
Khoa Hoc, No 4, 1962, pp 1-5.

JPRS 14452

The Vietnamese Society for the  
Popularization of Science and  
Technology, 4 pp.  
VIETNAMESE, per, Tin Tuc Hoat Dong  
Khoa Hoc, No 4, 1962, pp 46, 47.

JPRS 14452

INFORMATION RECEIVED DURING JULY  
ON COVER-TO-COVER TRANSLATIONS

Atomnaya Energiya, Vol XI, No 5/6, 1961.	CB
Avtomatika i Telemekhanika, Vol XXII, No 12, 1961.	ISA
Biofizika, Vol VI, No 5, 1961.	Elsevier Pub Co
Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LI, No 3, 1961.	CB
Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol LII, No 10, 1961.	CB
* Byulleten' Izobreteniy, No 2-4, 1962.	Derwent Information Service
Doklady Akademii Nauk SSSR, (Chemistry Section), Vol CXL, Nos 1-6, 1961.	CB
* Doklady Akademii Nauk SSSR, (Physics Section), Vol CXLI, No 1-3, 1962.	AIP Sov Phys - Dok Vol VII, No 1
Fizika Tverdogo Tela, Vol III, No 12, 1961.	AIP Sov Phys - Solid State Vol III, No 12
Fizika Tverdogo Tela, Vol IV, No 1, 1962.	AIP Sov Phys - Solid State Vol IV, No 1
Geologiya Nefti i Gaza, Vol IV, No 2-B, 1960.	RRG
Geologiya Nefti i Gaza, Vol IV, No 3-A, 1960.	RRG
Izmeritel'naya Tekhnika, No 12, 1961.	ISA
Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, No 10/11, 1961.	CB

Izvestiya Akademii Nauk SSSR, Seriya  
Geologicheskaya, No 4, 1961.

AGI

Izvestiya Vysshikh Uchebnykh Zavedeniy  
MVO, SSSR, Radiofizika, Vol V, No 1,  
1962, pp 1-204.

JPRS 14515

\* Izvestiya Vysshikh Uchebnykh Zavedeniy,  
MVO, SSSR, Radiofizika, Vol V, No 2,  
1962, (NY-7166).

\*JPRS

Izvestiya Vysshikh Uchebnykh Zavedeniy,  
MVO, SSSR, Radiotekhnika, Vol V, No 1,  
1962.

JPRS 14401

\* Izvestiya Vysshikh Uchebnykh Zavedeniy,  
MVO, SSSR, Radiotekhnika, Vol V, No 2,  
1962, (NY-7167).

\*JPRS

Kinetika i Kataliz, Vol II, No 6, 1961.

CB

Kolloidnyy Zhurnal, Vol XXIII, No 5,  
1961.

CB

Liteynoye Proizvodstvo, No 1, 1962.

BCIRA

Mikrobiologiya, Vol XXX, No 6, 1961.

AIBS

Radiokhimiya, Vol II, No 1/2, 1960.

AEC-tr-4576  
PL-480 (PST Nos 565, 566)

Radiotekhnika, Vol XVII, No 1/2, 1962.

AIEE

Radiotekhnika i Elektronika, No 12, 1961.

AIEE

Radiotekhnika i Elektronika, No 1, 1962.

AIEE

Stal, No 3, 1962.

BISI

Stanki i Instrument, Vol XXXII, No 10-12,  
1961.

PERA

Steklo i Keramika, Vol XVI, No 1-12,  
1959.

CB

Steklo i Keramika, Vol XVII, No 1-12,  
1960.

CB

Steklo i Keramika, Vol XVIII, No 12, 1961.	CB
Svarochnoye Proizvodstvo, Nos 8/9, 1961.	BWRA
Teoriya Veroyatnostey i yeye Primeneniya, Vol VI, No 2, 1961.	SIAM
Tsvetnye Metally, Vol II, No 6, 1961.	PS
*Tyl i Snabzheniye Sovetskikh Vooruzhennykh Sil, Nos 1-12, 1961.	ACSI H-6908-A-L ID 2166459
Uspekhi Fizicheskikh Nauk, Vol LXXV, Nos 3/4, 1961.	AIP Sov Phys - Uspekh Vol IV, No 6
Uspekhi Khimii, Vol XXX, No 7, 1961.	Cleaver-Hume Press Ltd.
Vestnik Svyazi, No 5, 1962.	JPRS 14536
Voprosy Onkologii, Vol VII, No 8/9, 1961.	Elsevier Pub Co
Voprosy Onkologii, Vol VII, No 10, 1961.	PP
*Voyennyy Vestnik, A & B, 1962.	ACSI I-0424-A, B ID 2191530
*Voyennyy Vestnik, Nos 1-6, 1963.	*ACSI I-1614 ID 2201421
Zavodskaya Laboratoriya, Vol XXVII, No 11/12, 1961.	ISA
Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol XLI, No 6, 1961.	AIP Sov Phys - JETP Vol XIV, No 6
Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol XLII, No 1, 1962.	AIP Sov Phys - JETP Vol XV, No 1
Zhurnal Fizicheskoy Khimii, Vol XXXV, No 10, 1961.	Cleaver-Hume Press Ltd.

Zhurnal Obshchey Khimii, Vol XXXI, No 9, 1961.	CB
Zhurnal Prikladnoy Khimii, Vol XXXIV, No 11, 1961.	CB
Zhurnal Tekhnicheskoy Fiziki, Vol XXXI, No 12, 1961.	AIP Sov Phys - Tech Phys Vol VI, No 12
Zhurnal Tekhnicheskoy Fiziki, Vol XXXII, No 1, 1962.	AIP Sov Phys - Tech Phys Vol VII, No 1

\*Table of Contents Not Available.

THE SOVIET JOURNAL OF  
**ATOMIC ENERGY**

*A translation of ATOMNAYA ÉNERGIYA,  
a publication of the Academy of Sciences of the USSR*

(Russian original dated November, 1961)

Vol. 11, No. 5

May, 1962

**CONTENTS**

	RUSS. PAGE	PAGE
On the Decrease of the Ion Pulse Duration and Ion Pulse Rate in a Cyclotron. N. I. Venikov	1065	421
The Calculation of Heat Transfer in Tubes for the Turbulent Flow of Liquids with Small Prandtl Numbers ( $Pr \ll 1$ ). V. M. Borishanskii, N. I. Ivashchenko, and T. V. Zabolotskaya.....	1070	426
The Use of Ion-Exchange Materials for the Preparation of Low Activity Radiation Sources. B. A. Zaitsev, A. I. Grivkova, and M. P. Glazunov.....	1075	431
On the Separation of Lithium Isotopes by the Method of Molecular Distillation of Liquid Lithium. V. A. Malyusov, V. Yu. Orlov, N. A. Malafeev, N. N. Umnik, and N. M. Zhavoronkov.....	1079	435
<b>LETTERS TO THE EDITOR</b>		
Investigation of the Reaction $\text{Be}^9(\text{d}, \text{i})\text{Be}^8$ . V. I. Serov, V. A. Pereshivkii, M. F. Andreev, and I. K. Aver'yanov.....	1084	440
Cross Sections of Inelastic Interaction of Fission Spectrum Neutrons. G. N. Lovchikova and O. A. Sal'nikov.....	1087	442
Angular Distribution of Iron-scattered $\gamma$ -Radiation from a Plane, Monodirectional $\text{Co}^{60}$ Source. A. V. Larichev.....	1088	443
The Effect of the Resonance Structure of Cross Sections on the Propagation of Fast Neutrons in Iron. M. N. Nikolaev, V. V. Filippov, and I. I. Bondarenko .....	1090	445
An Experimental Study of a Linear Accelerator with an Electron Pre-Buncher. G. I. Zhileiko and D. A. Yakovlev .....	1093	447
One Accurate Solution of a Nonstationary Albedo Problem. T. Kh. Sedel'nikov .....	1095	449
Some Physical Properties of a Layer of Artificial Graphite Particles. Z. R. Gorbis and V. A. Kalender'yan .....	1097	450
Determining Burn-Up in Spent Fuel Elements. A. P. Smirnov-Averin, V. I. Galkov, I. G. Sheinker, V. P. Meshcheryakov, L. A. Stabenova, and B. S. Kir'yanoj .....	1102	454
The Effect of the Nature of the Oxidant on the Transfer of Uranium into Solution. G. M. Nesmeyanova .....	1105	456
The Problem of Calibrating Radiometric Separators. Yu. A. Erivanskii .....	1107	458
Effect of Dust from Discharged Smoke on the Amount of Radioactive Fallout. P. N. Yagovsi	1108	459
<b>NEWS OF SCIENCE AND TECHNOLOGY</b>		
International Conference on Reactor Materials and Radiation Effects S. T. Konobeevskii .	1111	462
Exhibit of Czechoslovak Nucleonic Instruments P. Yavorskii .....	1115	465

Available From Consultants Bureau

## CONTENTS

Atomnaya Energiya Vol. XI No. 5, 1961	RUSS. PAGE	PAGE
IAEA Conference on Electronics in Nucleonics V. Matveev .....	1117	467
All-Union Seminar on the Uses of Radioactive Isotopes in Measurements and Instrumentation .....	1118	468
Tenth Session of the Commission on Determination of Absolute Age of Geological Formations A. I. Tugarinov .....	1121	470
Brief Communications .....	1125	473
 BIBLIOGRAPHY		
Review of Books Released by the State Atomic Press (Gosatomizdat) during 1960-1961.....	1126	476
Articles from the Periodical Literature .....	1130	480

Available From Consultants Bureau

# THE SOVIET JOURNAL OF ATOMIC ENERGY

A translation of ATOMNAYA ÉNERGIYA,  
a publication of the Academy of Sciences of the USSR

(Russian Original Dated December, 1961 )

Vol. 11, No. 6

May, 1962

## CONTENTS

	K. S. PAGE	F. S.E
Interaction of Intense Electron Beams with Plasma. A. K. Berezin, Ya. B. Fainberg, G. P. Berezin, L. N. Bolotin and V. G. Stupak .....	1143	493
Investigation of the BR-5 Fast Reactor (Space-Energy Neutron Distributions). A. I. Leipunskii, A. I. Abramev, Yu. A. Aleksandrov, G. V. Anikin, I. I. Bondarenko, A. G. Guseinov, V. I. Ivanov, O. D. Kazachkovskii, V. F. Kuznetsov, B. D. Kuz'minov, V. N. Morozov, M. N. Nikolaev, O. A. Sal'nikov, G. N. Smirenkin, A. S. Soldatov, L. N. Usachev and M. G. Yutkin .....	1148	498
On Some Methods for Raising the Power Level of Reactors with Gaseous Coolants. P. I. Khristenko .....	1156	506
The Critical Heat Flux for Boiling Water in Tubes. Z. L. Miropol'skii and M. E. Shitsman .....	1166	515
The Use of Resonance Detectors for the Investigation of Neutron Spectra in Fast-Neutron Reactors. V. I. Golubev, V. I. Ivanov, M. N. Nikolaev and G. N. Smirenkin .....	1174	522
Determination of the Separation Factor of Lithium Isotopes in Ion Exchange. S. G. Kata'nikov, V. A. Revin, B. M. Andreev and V. A. Minaev .....	1180	528
Some Problems in Nuclear Meteorology. B. I. Styro .....	1185	533
Delayed-Neutron Yields in the Fission of Pu <sup>239</sup> and Th <sup>232</sup> by 14.5 Mev Energy Neutrons. V. I. Shpakov, K. A. Petzhak, M. A. Bak, S. S. Kovalenko and O. I. Kostochkin .....	1190	539
The Kinetic Energy of Th <sup>232</sup> Photofission Fragments. B. A. Bochagov, A. P. Komar, G. E. Solyakin and V. I. Fadeev .....	1192	540
A Photocumulsion for Nuclear Investigations (PR-2). N. A. Perfilov, N. R. Novikova, V. I. Zakharov and Yu. I. Vikhrev .....	1195	543
An Apparatus for Studying Heat Exchange in Fluidized-Bed Reactors. N. I. Syromyatnikov, L. K. Vasnova and Yu. N. Shimanskii .....	1196	544
Measuring the Relative Fast-Neutron Flux Distribution in the VVR-M Reactor with Semiconductor Detecting Elements. R. F. Konopleva and S. R. Novikov ....	1199	546
The Use of Radioluminescence, Caused by $\alpha$ -Radiation of Po <sup>210</sup> , to Analyze Ores and Minerals. I. N. Plaksin, M. A. Belyakov and L. P. Starzhik .....	1201	548

Available From Consultant Bureau

- 249 -

## CONTENTS (continued)

<u>Atomnaya Energiya</u> Vol XI, No 6, 1961	PAGE	RUSS. PAGE
The Activation Energy of Solution of Uranium Dioxide in a Sulfuric Acid Medium with the Participation of Manganese Dioxide. E. A. Kanevskii and V. A. Pchelkin .....	1203	549
The Problem of Aerial Prospecting in Wooded Regions. A. V. Matveev .....	1205	550
A Study of the Fluorides of Some Multivalent Metals by Potentiometric Titration in Nonaqueous Media. A. P. Kreshkov, V. A. Drozdov, E. G. Vlasova, S. V. Vlasov and Yu. A. Buslaev .....	1208	553
The Thermal Decomposition of Uranium Ammonium Pentafluoride. N. P. Galkin, B. N. Sudarikov and V. A. Zaitsev .....	1210	554
NEWS OF SCIENCE AND TECHNOLOGY		
Atomic Energy at the Soviet Exposition in London .....	1213	556
Atomic Energy at the French National Exposition in Moscow.....	1215	557
[Remodeling the EBWR Reactor Vessel Source: Nucleonics, August 1961 .....		560]
Direct-Cycle Reactor with Diphenyl Coolant .....	1219	562
[The Belgian B-2 Research Reactor Source: Nucl. Engng. g, 62, 276 (1961) .....		564]
A Note on Neutron Irradiation Effects on the Mechanical Properties of Steels P.A. Platonov [A Grain-Irradiating Ship Source: Nucleonics, June, 1961 .....	1222	566
[Brief Communications .....		570]
		571]
BIBLIOGRAPHY		
New Books and Symposia .....	1227	573
INDEX FOR VOLUMES 10 AND 11 (1961)		
Tables of Contents .....	1229	
Author Index .....	1251	

Note. The Table of Contents lists all materials that appears in Atomnaya Energiya. Those items that originated in the English language are not included in the translation and are shown enclosed in brackets. Whenever possible, the English-language source containing the omitted reports will be given. Consultants Bureau Enterprises, Inc.

Available From Consultants Bureau

# Automation and Remote Control

A translation of *Avtomatika i Telemekhanika*, a publication of the Academy of Sciences of the USSR

Vol. 22, No. 12

(Russian Original Dated December, 1961)

June, 1962

## CONTENTS

	PAGE	RUSS. PAGE
Isoperimetric Problem in Analytic Design. <u>I. A. Litovchenko</u> . . . . .	1417	1553
Reduction of a Nonstationary Linear Differential Operator to a Sum of Stationary Operators. <u>A. N. Sklyarevich</u> . . . . .	1424	1560
Some Approximate Methods for Solving Problems of Optimal Control of Distributed Parameter Systems. <u>A. G. Butkovskii</u> . . . . .	1429	1565
Dynamics of Relay Self-Oscillating Extremum Control Systems. <u>V. Ya. Katkovnik and A. A. Pervozvanskii</u> . . . . .	1439	1576
Complex Periodic Operating Conditions in Relay Extremum Systems. <u>Yu. S. Popkov</u> . . . . .	1448	1585
Investigation of Nonlinear Unsteady-State Systems which are Acted Upon by Discontinuous Random Disturbances. <u>M. I. Gusev</u> . . . . .	1455	1593
Synthesis of Relay Systems from the Minimum Integral Quadratic Deviation. <u>Chan Jen-Wei</u> . . . . .	1463	1601
On the Exact Determination of Periodic Modes in a Relay Automatic Control System with Several Relay Elements. <u>K. K. Belya</u> . . . . .	1470	1608
On the Problem of Designing High-Speed Automatic Controllers for Industrial Objects. <u>G. D. Shirankov</u> . . . . .	1482	1620
Determination of the Economically Expedient Degree of Improvement of some Automatic Control Devices. <u>Yu. E. Efroimovich</u> . . . . .	1486	1625
Finding the Roots of Systems of Finite Equations by Means of an Electronic Simulator, Using Differential Equations with Variable Structure. <u>M. V. Rybachov</u> . . . . .	1497	1638
A Thyrite Multiplier with an Increased Passband. <u>F. B. Gul'ko</u> . . . . .	1507	1649
The Transfer Function of a Self-Saturating Magnetic Amplifier with a dc Resistive-Inductive Load for a Step Input Signal. <u>E. L. L'vov</u> . . . . .	1513	1656
On the Dynamics of Photoelectric Compensators. <u>A. N. Tkachenko</u> . . . . .	1530	1673
Application of the Principle of Invariance to the Nonlinear Action Resulting from a Disturbance. <u>B. M. Menskil and K. I. Pavlichuk</u> . . . . .	1538	1682
On the Basis of an Approximate Method of Investigating Transient Processes in Post-Action Automatic Control Systems. <u>V. S. Kislyakov</u> . . . . .	1542	1686
Method of Solution of Multiple-Loop Sampled Data System Equations. <u>I. M. Burshtein</u> . . . . .	1546	1689
A Review of the Book "Adaptive Control Processes - A Guided Tour" by <u>Richard Bellman</u> (Princeton University Press, 1961). <u>A. M. Letov</u> . . . . .	1551	1694

Available From Instrument Society of America

## CONTENTS (continued)

Avtomatika i Telemekhanika  
Vol XXII, No 12, 1961

RUSS.  
PAGE PAGE

### BIBLIOGRAPHY

List of Literature on Magnetic Elements for Automation, Remote Control, and Computer Engineering for 1960. <u>G. V. Subbotina and I. S. Trefilova</u> . . . . .	1556	1698
Author Index, Vol. 22, Nos. 1 - 12 . . . . .	1575	
Tables of Contents, Vol. 22, Nos. 1 - 12. . . . .	1581	

Available From Instrument Society of America

# BIOPHYSICS

## Biofizika

---

Volume 6, No. 5

1961

---

### TABLE OF CONTENTS

M.V. Vol'kenshtein and A.M. El'iasevich: A Statistical and Thermodynamic Theory of the Reduplication of Deoxyribonucleic Acid (DNA) . . . . .	1
T.M. Birshtein, V.I. Vorob'ev and O.B. Ptitsyn: Theory of Mechanochemical Phenomena. 1. Proximal Polyelectrolytic Forces, and Mechanochemistry . . . . .	10
Sheng Pei-Ken, L.A. Blummenfeld, A.E. Kalmanson and A.G. Pasynskii: Paramagnetic Resonance Spectra of Biological Materials. IV. The Action of Ionizing Radiation of Chemically Modified and Denatured Nucleic Acid Products . . . . .	18
M.K. Pukatova, V.N. Rogulenkova, and L.P. Katushin: Paramagnetic Resonance Spectra of Polypeptide Films and Proteins . . . . .	29
L.A. Tumerman, Iu.V. Morozov and Iu.I. Nabrukhan: A Test of the Experimental Basis of A. Szent-Gyorgyi's Bioenergetic Concept . . . . .	36
V.B. Evstigneev and V.A. Gavrilova: The Ability of a Synthetic Chlorophyll Lipoprotein Complex to Sensitize Oxidation-Reduction Reactions . . . . .	42
S.V. Tageeva, A.B. Brandt, and V.S. Korshunova: Optical Properties of Suspensions of Chlorella Pyrenoidosa . . . . .	48
L.N. Vorob'ev, G.A. Kurella, and G.A. Popov: Intracellular pH of Nitella Flexilis . . . . .	56
Iu.S. Chentsov, V.L. Boroviagin and V.Ia. Brodskii: Submicroscopic Morphology of Retinal Ganglionic Neurones as a Reflection of Specific Changes in their Metabolism . . . . .	61
N.V. Lobanova and N.I. Speranskaya: The Spectral Sensitivity of the Retinal Elements of Anomalous Trichromats . . . . .	71
I.Ia. Barskit, E.M. Brumberg and T.M. Kondrat'eva: Ultraviolet Fluorescence of Bone Marrow and Blood Cells in Man and Animals in Health and in Disease. 2. Their Condition in Radiation Sickness . . . . .	79
N.O. Razumovskii, O.L. Torchinskaya and V.S. Balabakha: Reduction of the Deposition in the Body of $Y^{91}$ and $Ce^{144}$ Through the use of Certain Chelating Agents . . . . .	84

### METHODS AND INSTRUMENTS

M.I. Mekshenkov and A.P. Andretsev: Universal Recording Equipment for Spectrofluorimetry . . . . .	88
--	----

### DISCUSSION

A.L. Byzov: Nature of the R Membrane in the Retina of the Frog . . . . .	92
--	----

Available From Elsevier Publishing Company

BULLETIN OF  
EXPERIMENTAL BIOLOGY  
AND MEDICINE

*A translation of BYULLEHEN' ÈKSPERIMENTAL'NOI  
BIOLOGII I MEDITSINY, a publication of the  
Academy of Medical Sciences of the USSR*

(Russian Original Dated March, 1961)

Vol. 51, No. 3, pp. 257-390

September, 1961

CONTENTS

	RUSS. PAGE
<b>PHYSIOLOGY</b>	
The Efferent Control of Receptors (On the Example of the Chemoreceptors of the Tongue). A. I. Esakov.....	257 3
Primary Cortical Reaction Zones under the Influence of the Receptor Apparatus of the Coronary Vessels and Pericardium. F. P. Yasinovskaya .....	263 8
The Influence of Inhibitors of the Glycolytic Cycle and the C <sub>3</sub> Acid Cycle on the Chemical Sensitivity of the Carotid Sinus and Intestinal Reflexogenic Zones. Teng Shih-Hsien .....	268 13
Investigation of the Mechanism of Chemoreception. Communication 4. The Action of Nicotine and of Acids on the Receptors of the intestine during Changes in their Excitability under the Influence of Different Concentrations of Mepolodoacetic Acid. N. A. Anikina.....	273 18
The Effect of Different Intensities of Stimulation of the Mechanoreceptors of the Urinary Bladder on the Striped Musculature. Communication 2. Relationship between the Character of the Reaction of Various Muscles and their Proximity to the Site of Stimulation. T. S. Lagutina .....	278 23
Investigation of the Trace Changes in the Electroencephalogram in Man during the Formation of Motor Conditioned Reflexes. Ts'u Chih-p'ing .....	283 28
<b>PATHOLOGICAL PHYSIOLOGY AND GENERAL PATHOLOGY</b>	
The Mechanism of Disorders in Motor and Secretory Function of the Small Intestine in Acute Radiation Sickness. K. V. Smirnov .....	288 33
The Influence of Dynamic Stereotype Conditioned Food Reflexes and Neurotic Condition on the Cardiac Rhythm Against a Background of Normal and Disturbed Cardiac Activity. B. M. Fedorov.....	293 37
Routes of Tetanus Toxin Entrance into the Central Nervous System and Some Problems in the Pathogenesis of Experimental Tetanus. Report I. Experiments on Albino Rats. G. N. Kryzhanovskii, L. A. Pevnitskii, V. N. Grafova, and A. A. Polgar .....	298 42
The Mechanism of Cortisone's Effect on Hyperthermia in Rabbits Induced by 2,4-Dinitrophenol. V. I. Pytskii .....	305 49
A Comparative Study of Changes in Diuresis during Experimental Convulsive Attacks. A. A. Lebedev.....	308 52
<b>BIOCHEMISTRY AND BIOPHYSICS</b>	
Respiration and Respiratory Chain Phosphorylation in Homogenates and Mitochondria of Rabbit Cardiac Muscle during Experimentally INDuced Myocarditis. A. M. Zubovskaya .....	311 55
Reduction of Dehydroascorbic Acid by Aortic Tissue of Guinea Pigs during Acute Radiation Sickness. L. I. Polikarpova.....	318 68

Available From Consultantopharm

Byulleten Eksperimental'noi Biologii i Meditsiny  
 Vol LI, No 3, 1961

Phospholipids in the Intestinal Juice of Dogs. A. S. Kainova and I. B. Kuvaeva.....	318	60
The Biochemical Composition of Amniotic Fluid and of Maternal and Fetal Blood at Various Periods of Pregnancy. A. M. Sozanskii .....	323	64
Changes in the Electrophoretic Properties of the Toxin of Clostridium oedematis under the Influence of Formalin. M. V. Ispolatovskaya and E. V. Vlasova.....	327	67
<b>PHARMACOLOGY</b>		
The Correlation between the Central and Peripheral Cholinolytic Effects of Certain Compound Esters of Diethylaminoethanol and Aromatic Acids. P. P. Denisenko.....	331	72
The Mechanism of Diphacyl's (Spasmolytin, Transentine) Effect on the Adrenal Cortical Function. A. N. Poskalenko.....	336	76
<b>MICROBIOLOGY AND IMMUNOLOGY</b>		
The Role of Lymphoid Organs in the Formation of Antitoxic Immunity. G. V. Shumakova .	340	80
<b>ONCOLOGY</b>		
The Production of Clones (Tumors from one Cell) of Jensen's Sarcoma. L. F. Sharlikova and U. Min.....	345	85
The Comparative Study of the Antigenic Structure of Tumor Tissue and Homologous Normal Tissue. Communication 3. The Immunobiological Characteristics of Desoxyribonucleoproteins Isolated from Gueren's Carcinoma and Normal Rat's Uterus. M. S. Lomakin and Yu. F. Malina .....	349	88
The Effect of (Thiazolyl-2) Amide of N-Acetylsarcosin (Asazol) on the Growth of Transplantable Tumors. L. F. Larionov and G. N. Platonova .....	355	94
<b>EXPERIMENTAL BIOLOGY</b>		
Histogenetic and Structural Regenerative Changes in the Liver of Rats Following Infliction of Perforating and Marginal Wounds. V. F. Sidorova .....	358	97
Analysis of the Effect of Repeated Estrone Injections on the Mitotic Activity of Uterine Epithelium in Mice. O. I. Epifanova .....	363	102
<b>MORPHOLOGY AND PATHOMORPHOLOGY</b>		
Histopathological Changes in the Central Nervous System in Dogs at Late Periods after Repeated Whole-Body Irradiation with X-Rays. A. F. Bibikova.....	367	106
Morphology of the Vascular Pressure Receptors in Dogs after Clinical Death. E. B. Khaisman and T. N. Grozdova .....	372	110
Early Morphological Changes in the Connective Tissue of Rats Around an Implanted Cellophane Disk. L. V. Ol'shevskaya.....	378	116
The Influence of Naphthalan Oil Extract on Changes in the Epidermis during Local $\alpha$ -Radiation. F. L. Leites and L. V. Funshtain.....	382	121

Available From Consultants Bureau

BULLETIN OF  
EXPERIMENTAL BIOLOGY  
AND MEDICINE

*A translation of BYULLETEN' ÉKSPERIMENTAL'NOI  
BIOLOGII I MEDITSINY, a publication of the  
Academy of Medical Sciences of the USSR*

(Russian Original Dated October, 1961)

---

Vol. 52, No. 10, pp.1105-1224

May, 1962

---

CONTENTS

	RUSS. PAGE	PAGE
<b>PHYSIOLOGY</b>		
Local Changes in the Human Electroencephalogram Associated with Serial Visual Images. L. M. Puchinskaya .....	1105	3
The Role of Distant Meaningful Stimuli in the Regulation of Carbohydrate Metabolism in Monkeys. I. S. Kanfor .....	1110	8
The Role of Cardiac Movements in the Formation of the Systolic Ballistocardiographic Complex. A. V. Mareev .....	1114	13
The Effect of Reflexes from Receptors in the Pericardium on Blood Filling in the Spleen. I. P. Krichevskaya .....	1119	19
On the Question of the "White" Bile. M. G. Badruttinov .....	1122	21
Pathological Physiology and General Pathology. The Functional Inhibition of the Physiological Anticoagulant System Caused by the Feeding of an Atherogenic Diet. G. G. Bazaz'yan, N. P. Sytina, G. V. Andreenko and B. A. Kudryashov .....	1126	26
The Mechanism of Changes in the Thromboplastic Activity of the Blood in White Rats Under the Influence of Large Doses of Vitamin C and B <sub>12</sub> . G. V. Andreenko and N. P. Sytina .....	1131	31
On the Restoration of the Neuroreflex Regulation of the Cardiovascular System During Resuscitation After Clinical Death. D. G. Maksimov .....	1135	34
On the Compensatory Hypertrophy of the Ischemized Kidneys. A. Kh. Kogan and V. V. Serov .....	1139	39
The Remote After-Effects of Radiation Upon Hemopoiesis. N. I. Shmeleva, and G. V. Veskoboinikov .....	1143	43
The Effect of Toad Skin Gland Secretion on the Permeability of Tissues to Vital Stains after Their Exposure to Experimental Acute Radiation. E. G. Dolgov .....	1147	47
On the Nature of the Rheumatoid Factor. N. I. Kuznetsova .....	1151	51
Some Data on Intestinal Paresis in Experimental Peritonitis. O. S. Kochnev .....	1155	54
The Mechanism of the Action of Stereoisomers of Cycloserine on Bacterial Cells. E. D. Vyshepan, K. I. Ivanova and R. K. Ledneva .....	1159	58
Polarographic Studies of Blood Serum of Animals Treated with Silicic Acid. Modl, Iana, Sabo, Istvan, and N. Chiki Ilona .....	1162	60
The Pharmacological Characteristics of Neurons Participating in Tremor Formation. V. B. Prozorovskii .....	1165	64

Available From Consultants Bureau

## CONTENTS (continued)

Byulleten' Eksperimental'noi Biologii i Meditsiny      RUSS.  
 Vol LII, No 10, 1961.      PAGE      PAGE

<b>The Correlation of Changes in the Volumetric Rate of Coronary Blood Flow and Cardiac Oxygen Consumption under the Influence of Adrenaline, Noradrenaline, Ephedrine and Pheanamine. I. Ye. Kisin .....</b>	1168	<b>67</b>
<b>Cytochemical Changes in the Uriniferous Tubules of the Kidney under the Action of Merkusal. V. G. Petrova.....</b>	1172	<b>71</b>
<b>The Breakdown of Phthivazid in the Gastrointestinal Tract. L. I. Grebennik, G. A. Smirnov and R. V. Gnevkovskaya .....</b>	1176	<b>75</b>
<b>On the Nature and Significance of Bacteriophagy Report XIII. Ultra thin Sections of Phages (Method and Preliminary Data). N. N. Zhukov-Verezhnikov, A. P. Pekhov and E. A. Buiko.....</b>	1179	<b>78</b>
<b>A Study of the Transforming Activity of Streptomycin-Resistance in the Pathogenic Microorganisms. P. P. Sakharov, E. I. Gudkova and T. N. Fudel....</b>	1182	<b>80</b>
<b>On the Age-Induced Antigenic Peculiarities of Tissues in Old Animals. V. A. Karaev...</b>	1187	<b>85</b>
<b>The Data Showing Antigenic Relationship Between <u>Salmonella typhi</u> and Human Leucocytes. V. Kh. Vilchanov and P. Popivanov .....</b>	1191	<b>89</b>
<b>Changes in the Hypohysis of Amphibian Larvae After Removal of the Pre-Optic Nuclei. A. A. Voitkevich .....</b>	1194	<b>93</b>
<b>Stimulation of Regeneration of Joint Cartilage by Cod Liver Oil and ASD (3rd Fraction). I. I. Khorostukhin .....</b>	1198	<b>96</b>
<b>Immunological Tolerance Established in Place of Incompatibility of Homografts in Dogs. A. V. Puza .....</b>	1201	<b>100</b>
<b>Changes in Hassall's Corpuscles in Regeneration of the Thymus After Exposure to X-Rays. D. G. Malkina .....</b>	1204	<b>104</b>
<b>MORPHOLOGY AND PATHOMORPHOLOGY</b>		
<b>A Histochemical Study of Inflammatory Proliferation of Epithelium. Ou Bao-syan.....</b>	1209	<b>110</b>
<b>Changes in the Intramural Nervous Apparatus in Compensatory Cardiac Hypertrophy. E. M. Krokhina, F. Z. Meerson and A. L. Mikosilyan .....</b>	1213	<b>115</b>
<b>METHODS</b>		
<b>A Method of Picking Up Cardiac Potentials From Moving Human Subjects for Radio-telemetry. V. V. Rozenblat and A. T. Vorob'ev .....</b>	1217	<b>119</b>

Available From Consultants Bureau

**PROCEEDINGS OF THE ACADEMY OF SCIENCES OF THE USSR**

**Chemistry Section**

**Volume 140, Numbers 1-6**

**September-October, 1961**

**CONTENTS**

<i>Doklady Akademii Nauk SSSR</i> (Chemistry Section)	PAGE	RUSS. ISSUE	RUSS. PAGE
Some Characteristics of the Gas-Liquid Chromatography of C <sub>7</sub> -C <sub>12</sub> Paraffins and Aromatic Hydrocarbons. V. G. Berezkin and L. S. Polak.....	871	1	115
Ammonolysis of 1,1-Di-(Chlorophenyl)-Ethane. V. L. Vaiser, V. D. Ryabov, and I. S. Panidi.....	875	1	118
The Polycondensation of Acetone and Other Carbonyl-Containing Compounds. V. A. Kargin, V. A. Kabanov, V. P. Zubov, I. M. Papisov and G. I. Kurochikina.....	878	1	122
Extraction of the Colored Complexes of Reagents of the Arsenazo-Thoron Group. V. L. Kuznetsov and S. B. Savvin .....	881	1	125
Concerning the Reaction of Rhenium Hexafluoride with Metal Fluorides. N. S. Nikolaev and E. G. Ippolitov.....	885	1	129
The Mechanism of the Solubility of the Phases in the System Au-Pt. V. V. Sanadze.....	889	1	133
The Electronegativity of the Perfluorovinyl Radical. R. N. Sterlin, Wei-Gan Li, and I. L. Knunyants.....	893	1	137
The Synthesis of Polymers with Regular Structure in the Polydimethylsiloxane Series. K. A. Andrianov, N. A. Kurasheva, I. K. Kuznetsova, and E. I. Gerhardt .....	896	2	365
Synthesis and Some Properties of Polytetracyanoethylene. A. A. Berlin and N. G. Matveeva.....	899	2	368
✓ New Conditions of Synthesis with Participation of the PtCl <sub>6</sub> <sup>2-</sup> Ion. Kh. I. Gil'dengenshel' and E. P. Pantelieeva.....	902	2	371
A Spectrophotometric Study of the Composition and Structure of Bromide and Iodide Complexes of Cobalt. B. F. Dzhurinskii and L. V. Tananaev.....	905	2	374
The Dehydration of Cycloaliphatic $\alpha$ -Ketones of the Cyclohexane and $\Delta^3$ -Cyclohexane Series. G. P. Kugatova-Shemyakina and V. S. Vesa .....	908	2	377
The Alkylation of Para-Dichlorobenzene, Para-Chlorobromobenzene, and Para-Dibromobenzene by Propylene in the Presence of Sulfuric Acid. Yu. G. Mamedaliev and R. S. Altmadanov.....	912	2	381
The Addition of Silane Hydrides to Allylamine. A. V. Topchiev, T. Chernysheva, and L. N. Lyashenko.....	915	2	384
The Synthesis of Optically Active Depipeptides. M. M. Shemyakin, E. L. Vinogradova, M. Yu. Felgina, N. A. Aldanova, V. A. Gladkina, and L. A. Shchukina.....	918	2	387
Triethyltin Peroxide. Yu. A. Alekseev and V. A. Shushunov.....	922	3	396
Synthesis of Polymers with Charged Hetero Atoms in Macromolecular Chains. Onium Polymerization. A. A. Berlin and E. F. Rasvodovskii.....	925	3	398
Synthesis of Phosphocyanine Dyes. V. A. Kukhtin, A. V. Kazymov, and T. N. Voskoboeva.....	928	3	401
The Uranyl Dicarbonate Complex. D. I. Ryabchikov and E. K. Korchemnaya.....	932	3	405
Unsymmetrical Three-Carbon Condensation with 1,3-Indandiones. I. I. Stankovich and G. Ya. Vanag.....	934	3	407

Available From Consultants Bureau

- 259 -

## CONTENTS (continued)

<i>Doklady Akademii Nauk SSSR</i> (Chemistry Section) Vol. CXL, Nos 1-6, 1961	PAGE	RUSS. ISSUE	RUSS. PAGE
Synthesis of Pyrrolidinecarboxylic Acids Through the Furane Derivatives. <u>A. P. Terent'ev, R. A. Gracheva, and L. M. Volkova</u> .....	937	3	610
Polymerization of 1-Heptene with the Catalyst System $\text{Al}(\text{iso-C}_4\text{H}_9)_3 + \text{TiCl}_4$ . <u>A. V. Topchiev, B. A. Krentsel', V. V. Dal', and V. D. Oppenheim</u> .....	941	3	614
Carbocyclization of D-Gulose and D-Idose 1,6-Anhydrides. <u>N. N. Shorygina and G. V. Davydova</u> .....	944	3	617
The Process and Products of the Hydrolytic Decomposition of Titanium Tetrachloride. <u>L. N. Shcheglov and Ya. E. Vil'nyanskii</u> .....	946	3	620
The Interaction of Ethylene Oxide with Carbon Disulfide. <u>V. S. Etlis, L. N. Grobov, and G. A. Razuvayev</u> .....	949	3	623
Ketonization of $\text{CH}_3\text{COOH}$ over $\text{CdO}$ and $\text{MgO}$ and the Kinetics of the Thermal Decomposition of $\text{Cd}(\text{CH}_3\text{COO})_2$ and $\text{Mg}(\text{CH}_3\text{COO})_2$ . <u>V. I. Yakerson, E. A. Federovskaya, and A. M. Rubinshtein</u> .....	952	3	626
5-Hydroxy-5-Indandion-1,3-yl(2)-Barbituric Acid. <u>G. Ya. Vanag and Yu. E. Pelcher</u> .....	955	4	815
Reactions of "Hot" Methyl Radicals in the Solid Phase at Low Temperatures. <u>R. A. Barbanskaya, B. N. Shelimov, and N. V. Fok</u> .....	958	4	818
Saturated Vapor Pressure of Rhenium Disulfide, Dioxide, and Trioxide. <u>V. L. Deev and V. I. Smirnov</u> .....	961	4	822
Polymerization and Copolymerization of Isoprene under the Action of $\alpha\text{-TiCl}_3 \cdot \text{Al}(\text{C}_2\text{H}_5)_3$ . <u>E. V. Zabolotskaya, V. A. Khodzhemipov, A. R. Gantmakher, and S. S. Medvedev</u> .....	964	4	825
Continuous Solid Solutions of Metallides $\text{Ti}_3\text{Al} - \text{Ti}_2\text{Al} - \text{TiSn}$ in the System $\text{Ti-Al-Sn}$ . <u>L. L. Kormilov and T. T. Nartova</u> .....	968	4	829
Use of Ammonium Phosphotungstate for Ion-Exchange Separation of Rubidium and Cesium. <u>V. Kourzhim, A. K. Lavrukhina, and S. S. Rodin</u> .....	971	4	832
Thermal Decomposition of Addition Products of Trialkyl Phosphites and Biacetyl. <u>V. A. Kukhtin and K. M. Kirillova</u> .....	973	4	835
Synthesis of Silicon-, Germanium-, and Tin-Containing Para-Substituted Styrenes and $\alpha$ -Methylstyrenes. <u>A. D. Petrov, E. A. Chernyshev, and T. L. Krasnova</u> .....	976	4	837
Phosphorous-Containing Esters of Acrylic and Methacrylic Acids. <u>A. N. Pudovik, E. L. Kashevarova, and Yu. P. Rudnev</u> .....	979	4	841
Hydrogenation of Unsaturated Compounds under Equilibrium Conditions on Catalysts of the Platinum Group. <u>D. V. Sokol'skii and G. F. Tret'yakova</u> .....	982	4	844
Ternary Complexes of Methylolithium. <u>T. V. Talalaeva, A. N. Rodionov, and K. A. Kocheshkov</u> .....	985	4	847
Synthesis of Phosphates Containing Residues of Higher Aliphatic Polyenoic Acids. <u>V. L. Shvets, N. A. Bogoliubskii, V. M. Plyachenko, L. V. Vokova, N. A. Preobrazhenskii, and G. I. Samokhalov</u> .....	988	4	851
New Data on the Behavior of Zirconium and Hafnium Oxyhydrates in Aqueous Solutions and some Organic Solvents. <u>L. I. Yuranova, L. N. Komissarova, and V. E. Plyushchev</u> .....	992	4	855
The Successive Formation of Products during Liquid-Phase Oxidation of Cumene. <u>V. L. Antonovskii and B. I. Makalets</u> .....	996	5	1070
Synthesis in the Field of 5-Nitrofuryl-2-Polyalkenals and 5-Nitrofuryl-2-Polyalkenes. The Reaction of Carbethoxymethyleneatriphenylphosphorane and Acetylmethylenetriphenylphosphorane with $\alpha,\beta$ -Unsaturated and Polyene Aldehydes of the 5-Nitrofuran Series. <u>K. K. Venter, S. A. Gillier, V. P. Kucherov, V. V. Tsimule, and A. M. Kardinya</u> .....	999	5	1073

Available From Consultants Bureau

## CONTENTS (continued)

*Doklady Akademii Nauk SSSR*  
(Chemistry Section)  
Vol CXL, Nos 1-6, 1961

	PAGE	RUSS. ISSUE	RUSS. PAGE
On the Interaction of Bases with Trans-(Pten <sub>2</sub> Cl <sub>2</sub> )Cl <sub>2</sub> . A. A. Grinberg and Yu. N. Kukushkin.....	1002	6	1076
The Nature of the Kinetics of Styrene Polymerization Initiated by Tertiary Butyl Peroxide and by Tertiary Butyl Perbenzoate. S. S. Ivanchev, A. L. Yurzhenko, and N. I. Solomko .....	1005	6	1079
Total Synthesis of Soy Bean Oil Glycerides. G. A. Serebrennikova, T. K. Mitrofanova, A. A. Kraevskii, I. K. Sarycheva, and N. A. Preobrazhenskii.....	1008	6	1083
The Question of the Formation of Finely Crystalline Structures in Glass. N. V. Solomin, V. I. Shelyubskii, and N. M. Vaisfel'd.....	1012	6	1087
Dehydration of Primary Dodecyl Alcohol over Magnesium Sulfate. I. Spitsyn, I. E. Mikhailenko, and G. N. Pirogova.....	1015	6	1090
The Electrical Conductivity of Chelate Polymers. A. P. Terent'ev, V. M. Vozzhennikov, Z. V. Zvonkova, and L. I. Badzhadze.....	1018	6	1093
Oxidation of $\beta$ -Naphthol and Some of its Derivatives by Peroxide Compounds. M. L. Khidkel', A. L. Buchachenko, G. A. Razuvaeve, L. V. Gorbunova, and M. B. Neiman .....	1022	6	1096
The Preparation of Hydrocarbons of a High Degree of Purity by Temperature- Gradient Chromatography. O. V. Al'ishuler, O. M. Vinogradova, S. Z. Roginskii, and M. I. Yanovskii.....	1026	6	1307
Routes for the Synthesis of Three-Dimensional Heteroorganic Polymers of Regular Structure. K. A. Andrianov.....	1029	6	1310
Certain Features of the Interaction of Uranoso-Uranic Oxide with Acids. N. L. Blinova, V. M. Solntsev, and Yu. M. Tolmachev.....	1033	6	1314
Investigation of the Reactions of Phenyl Radicals in Solution by an Isotope and Mass Spectrometric Method. L. P. Gragorov and M. Ya. Turkina .....	1036	6	1317
The State of the Water in the Chlorophyll Molecule. A. V. Karyakin, V. M. Kuryutin, and A. K. Chibisov .....	1040	6	1321
Some Regularities of the Oxidation of Polydimethylsiloxane Rubber. A. S. Kuz'minskii and E. A. Goldovskii .....	1043	6	1324
Isotopic Analysis of Nitrogen by the Method of Electron Paramagnetic Resonance. O. L. Lebedev, M. L. Khidkel', G. A. Razuvaeve.....	1046	6	1327
The Full Synthesis of 2,5,7,8-Tetramethyl-2-(4',8',12'-Trimethyltridecanyl)-6- Hydroxychromen (Vitamin E, $\alpha$ -Tocopherol) and its Derivatives. M. E. Maurit, G. V. Smirnova, E. A. Parfenov, I. K. Sarycheva, and N. A. Preobrazhenskii .....	1049	6	1330
p-Dimethylaminophenylmercury Derivatives of Hydroxyazo Compounds and Quinone Phenylhydrazones. A. N. Nasmeyanov and D. N. Kravtsov .....	1053	6	1334
Equilibrium Conditions for the Reduction of Nickel Ferrite with Hydrogen. G. P. Popov .....	1057	6	1338
Rotatory Dispersion of Compounds of the Cedapse Series. V. M. Potapov, M. L. Goryaev, G. A. Tolstikov, and A. P. Terent'ev.....	1059	6	1341
Radiation Method for the Synthesis of New Derivatives of Heterocyclic Compounds. S. A. Safarov, M. A. Proskurnin, and B. P. Bogatikov .....	1063	6	1345
Thermal Stability and Initiating Activity of Diacyl Peroxides of Paraffinic and Phenylcarboxylic Acids. A. L. Yurzhenko, S. S. Ivanchev, and V. L. Galibei ..	1065	6	1348
Oxidation, Reduction, and Disproportionation Reactions of Polyfluoroaltsosiloxanes. A. Ya. Yakubovich, V. A. Ginsburg, S. P. Makarov, V. A. Shpan'kii, N. P. Privezentseva, L. L. Martynova, B. V. Kir'yaa, and A. L. Lemke .....	1069	6	1352

Available From Consultants Bureau

# Soviet Physics

## SOLID STATE

*A Translation of the Journal "Fizika Tverdogo Tela"*

(Russian Original Vol. 3, No. 12, pp. 3559-3748, December, 1961)

Vol. 3, No. 12, pp. 2589-2766

June, 1962

### CONTENTS

	RUSS. PAGE	PAGE
Science as a Tool of the Builders of Communism . . . . .	2589	I
Concerning the Theory of Annealing of Radiation Defects. <u>B. Ya. Yurkov</u> . . . . .	2591	3563
Barrier-Layer Photocurrent in p-n Junctions for an Arbitrary Generation Function. <u>V. K. Subashiev</u> . . . . .	2597	3571
Thermomagnetic Phenomena in Degenerate Semiconductors and Metals in an Arbitrary Magnetic Field. <u>B. M. Askerov</u> . . . . .	2604	3581
The Exciton-Phonon Absorption Spectrum in Cu <sub>2</sub> O Crystals. <u>I. S. Gorban'</u> and <u>V. B. Timofeev</u> . . . . .	2606	3584
The Effect of Uniaxial Plastic Deformation on the Electrical Properties of n-Type Germanium. <u>A. R. Regel', F. A. Chudnovskii, and S. G. Shul'man</u> . . . . .	2610	3589
Ultra-High Frequency Dielectric Properties of a Group of Oxides of 3d Transition Metals. <u>A. A. Samokhvalov</u> . . . . .	2613	3593
Resonance Scattering of Light by Impurity Centers in a Solid. <u>I. P. Dzyub and A. F. Lubchenko</u> . . . . .	2619	3602
The Electrical Properties of Amorphous Films of Tellurium and the Effect of Additions on Their Crystallization. <u>Yin Shih-tuan and A. R. Regel'</u> . . . . .	2627	3614
Photoemission from Gallium Arsenide. <u>A. N. Arsen'eva-Geil'</u> and <u>Wang Pao-k'un</u> . . . . .	2632	3621
Influence of Secondary Illumination on Gallium Arsenide Photoemission. <u>Wang Pao-k'un</u> and <u>A. N. Arsen'eva-Geil'</u> . . . . .	2637	3628
Secondary Electron Emission from Iodine. <u>E. G. Martsinovskaya, T. L. Matskevich, and G. M. Rubanova</u> . . . . .	2641	3634
The Effect of Plastic Deformation and Irradiation on the Internal Friction of LiF Single Crystals. <u>N. A. Tyapunina, M. P. Shaskol'skaya, Chao-chien, and Yu. Kh. Vekilov</u> . . .	2643	3637
Thermoelectric Properties of Solid Solutions Mg <sub>2</sub> Si-Mg <sub>2</sub> Sn. <u>E. N. Nikitin,</u> <u>V. G. Bazanov, and V. I. Tarasov</u> . . . . .	2648	3645
The Change of Mechanical Properties of Germanium with Changing Concentration of Current Carriers. <u>N. Ya. Gorid'ko, P. P. Kuz'menko, and N. N. Novikov</u> . . . . .	2652	3650
Photoconductivity in $\alpha$ -Silicon Carbide. <u>G. N. Porozhnikova and G. F. Kholuyanov</u> . . . . .	2657	3657
The Nernst-Ettingshausen Effect in a Strong Magnetic Field for a Mixed Scattering Mechanism. <u>B. M. Askerov</u> . . . . .	2662	3663

Available From American Institute of Physics

CONTENTS (Contd)

<u>Fizika Tverdogo Tela</u> Vol III, No 12, 1961	RUSS. PAGE	PAGE
Thermomagnetic Phenomena in Semiconductors in a Strong Magnetic Field for the Case of Electron Scattering by a Short-Range Potential. <u>A. I. Ansel'm and B. M. Askerov</u> .....	2665	3668
Smearing Out of the Singularities of the Frequency Dependences of the Damping of Elementary Excitations in Crystals. <u>M. A. Krivoglaz</u> .....	2671	3678
Theory of Diffuse Scattering of X-Rays, Neutrons, and Electrons by Ionic Crystals Containing Charged Defects or Impurities. <u>M. A. Krivoglaz</u> .....	2674	3682
Recombination Statistics for Carrier Trapping by Excited States of Recombination Centers. <u>A. V. Rzhanov</u> .....	2680	3691
The Theory of Surface Recombination in Semiconductors. <u>A. V. Rzhanov</u> .....	2684	3693
Spin-Lattice Relaxation in Ferrites with Paramagnetic Impurities. <u>L. L. Buishvili</u> .....	2689	3706
Electric Conductivity of Polar Crystals with Low Carrier Mobility. I. Structure of the Energy Spectrum. <u>R. R. Dogonadze and Yu. A. Chizmadzhev</u> .....	2693	3712
Electric Conductivity of Polar Crystals with Low Carrier Mobility. II. Mobility Calculations. <u>R. R. Dogonadze, A. A. Chernenko, and Yu. A. Chizmadzhev</u> .....	2698	3720
The Macroscopic Theory of Ferroelectrics. <u>I. I. Ivanchik</u> .....	2705	3731
Quantum Thermomagnetic Nernst-Ettinghausen Effects in n-InSb and n-InAs. <u>Kh. I. Amirkhanov, R. I. Bashirov, and M. M. Gadzhialiev</u> .....	2713	3743
BRIEF COMMUNICATIONS		
The Nature of Acceptor Levels in Hexagonal Selenium. <u>P. T. Kozyrev</u> .....	2716	3746
The Efficiency of Transformation of Direct Solar Radiation Energy Into Electric Energy Using a CdTe Photocell. <u>G. P. Naumov and O. V. Nikolaeva</u> .....	2718	3748
INDEXES TO VOLUME 3		
Author Index .....	2721	
Subject Index .....	2740	

Available From American Institute of Physics

# Soviet Physics

## SOLID STATE

*A Translation of the Journal "Fizika Tverdogo Tela"*

(Russian Original Vol. 4, pp. 3-304, January, 1962)

Vol. 4, No. 1, pp. 1-222

July, 1962

### CONTENTS

	RUSS. PAGE	PAGE
Octupole Interaction of Polarized Atoms in Crystals. I. Ts. Lyast . . . . .	1	3
The Effect of Low-Temperature Deformation on Subsequent Aging in Armco Iron. N. N. Davidenkov and V. D. Yaroshevich . . . . .	5	8
Distribution of Cations in a Multicomponent Spinel. A. N. Men' . . . . .	9	14
On the Thermoelectromotive Force in Bismuth and Bismuth-Tellurium Alloys. D. V. Gitsu, G. A. Ivanov, and A. M. Popov . . . . .	15	22
Resonance of Domain Boundaries and Spin Resonance in Magnesium-Nickel Ferrites. V. I. Shakhov and E. I. Kondorskiy . . . . .	20	29
Some Features of the Growth and Twin Structure of Germanium Dendrites and of the Anomalous Segregation of Impurities in the Process of Dendritic Crystallization. M. A. Medvedev, B. G. Anokhin, I. M. Skvortsov, A. S. Korotkov, and E. V. Myakinenkova . . . . .	25	36
The Volt-Ampere Characteristics of Field Emission from CdS Single Crystals. I. I. Sokol'skaya and G. P. Shcherbakov . . . . .	31	44
The Theory of Vibrations of a Lattice with a Defect. N. N. Kristofel' . . . . .	37	52
"Slow" Diffusion of Silver into Germanium. V. E. Kosenko . . . . .	42	59
Determination of the Absorption Coefficients of an Electron Current in a Solid from the Regularities of X-Ray Photo Emission of a Massive Photocathode. M. A. Rumsh, V. N. Shchemelev, and Kh. Prois . . . . .	44	62
On the Mechanism of the External Photoeffect from Massive Photocathodes under the Action of X Rays. M. A. Rumsh, V. N. Shchemelev, and Kh. Prois . . . . .	49	69
Electrical Conductivity of Magnesium and Zinc Titanates Subjected to Neutron Radiation. L. K. Vodop'yanov . . . . .	52	74
The Influence of Distortions of Crystals Lattices in Partially Ordered Binary Alloys with Different Sized Atoms on the Intensity of Scattered X Rays. A. A. Smirnov, E. A. Tikhonova, and A. V. Chalyi . . . . .	55	77
Plasmon Spectra in In and InSb. L. A. Balabanova, M. M. Bredov, and B. A. Kotov . . . . .	60	86
Concerning the Formation of a Special Surface Structure on Wires Heated to Incandescence by DC Current. D. N. Vasil'kovskiy and L. M. Tadzhieva . . . . .	63	90
Measurement of Spin-Lattice Relaxation Time in Supercooled Solutions of $Ti^{+}$ by the Continuous Saturation Method. N. S. Garif'yanov, V. N. Fedotov, and R. Kh. Timerov . . . . .	67	96

Available From American Institute of Physics

## CONTENTS (continued)

Fizika Tverdogo Tela  
Vol IV, No 1, 1962

RUSS.  
PAGE PAGE

Volt-Ampere Characteristics of p-n Junctions in the Forward Direction. <u>A. A. Grinberg</u> . . . . .	69	99
Frequencies and Amplitudes of Vibrations of Atoms in a Diamond Type Crystal for a Wave Vector Directed Along a Face Diagonal of the Cube. <u>Z. A. Demidenko, T. I. Kucher, and K. B. Tolpygo</u> . . . . .	73	104
Temperature Dependence of Carrier Lifetime in Indium Antimonide. <u>D. N. Nasledov and Yu. S. Smetannikova</u> . . . . .	78	110
Thermoelectric Properties of $\text{Bi}_2\text{Te}_3$ - $\text{Bi}_2\text{Se}_3$ over the Temperature Range 77-630 °K. <u>E. K. Iordanishvili and B. M. Trakhbrot</u> . . . . .	87	122
Study of the Disorientation of Mosaic Blocks by Measurement of Small-Angle X-Ray Scattering. <u>V. I. Betekhtin and A. I. Slutsker</u> . . . . .	94	132
X-Ray Study of the Initial Stage of Plastic Deformation in Polycrystalline Metals. <u>D. M. Vasil'ev and N. M. Dobrodeeva</u> . . . . .	99	140
Light Absorption in Silver Halides. <u>P. V. Meiklyar</u> . . . . .	105	148
Mechanism of Scattering by Ionic Impurities in $\text{Bi}_2\text{Te}_3$ . <u>B. A. Efimova, E. V. Kel'man, and L. S. Stil'bans</u> . . . . .	108	152
Certain Features of Raman Scattering in Piezoelectric Crystals. <u>L. G. Grechko and L. N. Ovander</u> . . . . .	112	157
On the Thermal Conductivity of Polycrystalline Cuprous Oxide. <u>A. N. Andrievskii, E. N. Dimarova, and M. M. Pidorya</u> . . . . .	116	163
Galvanomagnetic Phenomena in Semiconductors with Anisotropic Electron Scattering. <u>I. Ya. Korenblit</u> . . . . .	120	168
On the Application of Retarded and Advanced Green's Functions in the Theory of Ferromagnetism. <u>E. N. Yakovlev</u> . . . . .	127	179
On the Possibility of Superconductivity in Semiconductors. <u>V. L. Gurevich, A. I. Larkin, and Yu. A. Firsov</u> . . . . .	131	185
Life to Rupture of Metals Subjected to Torsion. <u>I. E. Kurov and V. A. Stepanov</u> . . . . .	135	191
The Secondary (Lower) Limit Condensation Temperature for In, Sn, Pb, and Bi. <u>L. S. Palatnik, N. T. Gladikh, and M. N. Naboka</u> . . . . .	143	202
Fine Structure of Exciton Absorption Lines of CdS Monocrystals. <u>E. F. Gross and B. S. Razbirin</u> . . . . .	146	207
On the Spectral Distribution of the Edge Luminescence Excitation of CdS Crystals. <u>E. F. Gross, B. S. Razbirin, and R. I. Shekhamet'ev</u> . . . . .	150	213
On the Effective Magnetic Moment of a Transition Metal Atom Forming in a Dilute Alloy with a Simple Metal. <u>Yu. A. Izyumov and L. M. Noskova</u> . . . . .	153	217
Magnetic Scattering of Slow Neutrons in Dilute Alloys of a Transition Metal with a Simple Metal. <u>Yu. A. Izyumov</u> . . . . .	158	225
Analysis of Dislocation Structure in Crystals with Polarized Light. <u>V. L. Indenborn, V. I. Nikitenko, and L. S. Milevskii</u> . . . . .	162	231
Magnetic Susceptibility of Vanadium Oxide at 80 to 370 °K. <u>N. I. Bogdanova and G. M. Loginov</u> . . . . .	167	236
Radiation-Induced Changes in the Properties of Rochelle Salt Crystals (in Weak Electric Fields). <u>E. V. Peshikov and S. V. Starodubtsev</u> . . . . .	170	239
Electron Paramagnetic Resonance and Optical Spectra for $\text{Yb}^{3+}$ Ions in $\text{CdF}_3$ . <u>V. K. Konyukhov, P. P. Pashinin, and A. M. Prokhorov</u> . . . . .	175	246
Fragmentation Phenomena in Iron and Steel Caused by Explosive Shock Wave Interactions. <u>A. G. Ivanov, S. A. Novikov, and Yu. I. Tarasov</u> . . . . .	177	249
New Exciton Series of Lines in the Blue and Light Blue Regions of the Spectrum of $\text{Cu}_2\text{O}$ Crystals. <u>E. F. Gross and Chang Kuang-yin</u> . . . . .	186	261

Available From American Institute of Physics

## CONTENTS (continued)

Fizika Tverdogo Tela  
Vol IV, No 1, 1962

RUSS.  
PAGE PAGE

Angular Distribution of Secondary Electrons for an Effective Emitter Consisting of an MgO Film on a CuAlMg Alloy Base. <u>V. A. Alekseev and V. I. Borisov</u> . . . . .	191	265
Diffusivity and Solubility of Thallium in Germanium. <u>V. I. Tagirov and A. A. Kuliev</u> . . . . .	196	272
Reversible Optico-Hydrodynamic Phenomena in a Nonideal Exciton Gas. <u>S. A. Moskalenko</u> . . . . .	199	276
Investigation of Work Hardening of Copper by a Nuclear Magnetic Resonance Method. <u>V. S. Pavlovskaya and Yu. S. Stark</u> . . . . .	205	285

### BRIEF COMMUNICATIONS

The Dependence of the Hall Coefficient in p-Germanium on Magnetic Field Strength. <u>P. I. Baranskii and R. M. Vinetskii</u> . . . . .	208	289
Optical and Photoelectric Properties of Mercury Sulfide in the Fundamental Absorption Edge Region. <u>E. F. Gross and F. I. Kreingol'd</u> . . . . .	210	291
Crystal Absorption Spectrum Due to Polariton Decay. <u>L. N. Ovander</u> . . . . .	212	294
New Form of Alternating Photoconductivity of Cadmium Sulfide Crystals. <u>V. F. Bikik and P. G. Borzyak</u> . . . . .	213	296
On the Theory of Optical Transitions in Semiconductors. <u>V. I. Bonch-Bruevich</u> . . . . .	215	298
Charge Carrier Mobility and the Effective Mass of Electrons in Alloys of Indium and Gallium Antimonides. <u>V. I. Ivanov-Omskii and B. T. Kolomiets</u> . . . . .	216	299
Anisotropy of the Galvanomagnetic Properties of n-Type Bi <sub>2</sub> Te <sub>3</sub> . <u>B. A. Efimova, V. I. Novikov, and A. G. Ostroumov</u> . . . . .	218	302

Available From American Institute of Physics

## PETROLEUM GEOLOGY

### Geologiya Nefti i Gaza

#### TABLE OF CONTENTS

Vol. 4, No. 2-B, 1960

1. Karst type of porosity of productive carbonate sediments. V. N. Dakhnov and E. M. Galimov . . . . . p. 95
2. Density and porosity of clayey rocks under differing conditions of moisture. E. A. Prozorovich . . . . . p. 98
3. Application of geophysical logging data for unification of stratigraphic sections. S. S. Itenberg . . . . . p. 105
4. Geochemistry of bromine and iodine of formation waters of the Kuybyshev area on the Volga. A. N. Kozin . . . p. 110
5. Concerning the papers on oil output. S. N. Shan'gin . . . p. 114
6. "Aqueous inclusions" in gas and oil deposits of southern Timan. B. N. Lyubomirov . . . . . p. 118
7. Geology of the Stalino field in Albania. S. Pasho and M. N. Kochetov . . . . . p. 120

- \* - \* - \* - \*

## PETROLEUM GEOLOGY

Published By

THE REVIEW OF RUSSIAN GEOLOGY

Box 171

McLean, Virginia

Translator and Publisher  
Dr. James W. Clarke

Business Manager  
Grace Carrington

Editorial Assistant  
Antoinette B. Clarke

## PETROLEUM GEOLOGY

### TABLE OF CONTENTS Vol. 4, No. 3-A, 1960

#### Geologiya Nefti i Gaza

1. Results of exploration and measures for securing a growth in reserves of oil and gas in 1960 in the Azerbaydzhan SSR. B. K. Baba-Zade . . . . . p. 125
2. Economic effectiveness of geological exploration for oil and gas in the Dnieper-Donets depression and on the northwest margins of the Donets Basin. A. S. Moromtsev and V. M. Zav'yakov . . . . . p. 131
3. Tectonics of the Chelekeno-Gubkin uplift. V. A. Kornev . . . . . p. 135
4. Paleogeographic construction according to data of ejecta of mud volcanoes. A. L. Putkaradze and F. G. Dadashev . . . . . p. 142
5. Influence of lithologic variability on the distribution of oil in natural reservoirs, and the construction of reservoir maps. V. G. Umnov . . . . . p. 147
6. Factors affecting the geothermal step in the oil fields of Azerbaydzhan. Sh. F. Mekhtiev and S. A. Aliev . . . . p. 151
7. Boundary of the Eocene and Oligocene in the Eastern Carpathians. A. V. Maksimov . . . . . p. 155

- \* - \* - \* - \*

PETROLEUM GEOLOGY  
Published By  
THE REVIEW OF RUSSIAN GEOLOGY  
Box 171  
McLean, Virginia

Translator and Publisher  
Dr. James W. Clarke

Business Manager  
Grace Carrington

Editorial Assistant  
Antoinette B. Clarke

Published twice each month  
\$20.00 a year (24 issues)

Published on a nonprofit basis in the interest of geological science

# Measurement Techniques

A translation of *Izmeritel'naya Tekhnika*, a publication of the  
Academy of Sciences of the USSR

Russian Original Dated December, 1961

1961, No. 12, pp. 935-1064

June, 1962

## CONTENTS

	PAGE	RUSS. PAGE
Important Tasks of State Inspection Laboratories for Measuring Equipment. <u>B. L. Sokolov</u> . . . . .	935	1
Defining the Concept of Measurement. <u>K. B. Karandeev, V. I. Rabinovich, and M. P. Tsapenko</u> . . . . .	938	4
Determining in State Testing Whether Instruments Are Reliable and Suitable for Mass Production. <u>M. A. Zernel'man and N. I. Tyurin</u> . . . . .	941	7
A Method of Raising the Accuracy of Measuring Systems. <u>N. A. Chekhonadskii</u> . . . . .	943	8
LINEAR MEASUREMENTS		
Wide-Range Pneumatic Instruments for Automatic Checking of Dimensions. <u>E. I. Ped'</u> . . . . .	949	12
Repair and Adjustment of Telescope Calipers for Internal Measurements. <u>P. U. Markov</u> . . . . .	951	14
MEASUREMENTS OF MASS		
Method for Checking Aerometers in a Single Liquid. <u>M. D. Ippits and M. I. Tyutikova</u> . . . . .	955	17
Checking Truck Weighbridges. <u>A. N. Maiskii</u> . . . . .	960	21
MEASUREMENTS OF TIME		
Electronic Relay for a Printing Chronograph. <u>A. I. Yazev and Yu. V. Markov</u> . . . . .	962	22
MECHANICAL MEASUREMENTS		
Deformation Errors of Piston Manometers at Pressures Up to 10,000 kg-wt/cm <sup>2</sup> . <u>M. K. Zhokhovskii and V. V. Bakhvalova</u> . . . . .	964	23
Vibration Dynamometers. <u>L. G. Etkin</u> . . . . .	969	27
Method for Gluing and Sealing Strain-Gauge Transducers. <u>N. G. Mikhailovskii</u> . . . . .	975	31
Checking Taximeters. (Comments on A. I. Suvorov's article) . . . . .	976	31
THERMOTECNICAL MEASUREMENTS		
Computation of the Basic Parameters for a Telescope of a Radiation Pyrometer with a Thermistor. <u>Vanbo Pak</u> . . . . .	979	33
Thermal Inertia of Thermocouples. <u>Yu. A. Zholkov</u> . . . . .	983	36
ELECTRICAL MEASUREMENTS		
Technique and Equipment for Nondestructive Testing of Electrical Steel. <u>R. I. Yanus and Yu. A. Vdovin</u> . . . . .	986	37
New Method for Obtaining Several Current Measuring Ranges. <u>M. A. Belilovskii</u> . . . . .	989	40
Measuring the Power and Quantity of Electricity in Electrolytic Circuits. <u>N. M. Rudnyi and V. V. Maslovskii</u> . . . . .	990	41
Instrument for Measuring Direct Current in Electrolyte Jets. <u>P. P. Pirotskii and N. N. Shvetsov</u> . . . . .	993	43
Method for Measuring Inductances and Capacitances with Currents Displaced by 90°. <u>G. Savin</u> . . . . .	996	45
Checking de Wastimeters by the Voltag Summation Method. <u>I. N. Osher</u> . . . . .	999	47
Portable Device for Checking Electrical Measuring Instruments. <u>D. D. Knyazev</u> . . . . .	1002	49
Portable Three-Phase Testing Equipment. <u>I. P. Grishanov</u> . . . . .	1003	50
Difficulties in Testing Electricity Meters. <u>B. A. Bliznyuk</u> . . . . .	1005	52

Available From Instrument Society of America

## CONTENTS (continued)

<u>Izmeritel'naya Tekhnika</u> <u>No 12, 1961</u>	RUSS. PAGE	PAGE
Method for Checking and Measuring Microphonic Noise in Electron-Tubes. Z. V. Magrachev .	1006	53
<b>HIGH AND ULTRA-HIGH FREQUENCY MEASUREMENTS</b>		
Application of Thermal Converters and Thermistors for Measuring Current in a Measuring Antenna. V. S. Buzinov . . . . .	1008	54
<b>INFORMATION</b>		
GDR Exhibition of Monitoring, Measuring, and Control Equipment. M. Kh. Shliomovich and M. Sh. Kapnik . . . . .	1011	56
Analytical Balances on Elastic (Strip) Suspensions. . . . .	1012	57
<b>ESSAYS AND REPORTS</b>		
Method for Automatic and Accelerated Testing of Moisture Content in Solid Fuels. B. M. Ravich . . . . .	1014	57
<b>MATERIAL RECEIVED BY THE EDITORIAL BOARD</b>		
Centralization of Test Laboratories in Plants. E. A. Simson . . . . .	1018	60
Certain Problems in the Operation of the GKLs (State Inspection Laboratories). Yu. A. Cherkasov . . . . .	1019	62
Organizing the Production of Air Conditioning Equipment. M. E. Galkin . . . . .	1020	62
Application of Light Filters to Oscilloscopes. Yu. A. Magnitskii . . . . .	1021	63
Leveling Straightedge of a New Construction. N. G. Klyuchnikov . . . . .	1021	63
Metal Pedestals for Manometers. G. V. Savchenko . . . . .	1022	63
<b>REVIEWS</b>		
Techniques for Measuring Mass. Reviewed by P. N. Agaletskii . . . . .	1023	64
<b>FROM FOREIGN JOURNALS</b> . . . . .		
Author Index, 1961, Nos. 1-12 . . . . .	1025	65
Tables of Contents, 1961, Nos. 1-12 . . . . .	1031	
	1039	

Available From Instrument Society of America

BULLETIN OF THE ACADEMY OF SCIENCES OF THE USSR  
Division of Chemical Science

Number 10

October, 1961

CONTENTS

Izvestiya Akademii Nauk SSSR Otделение Химических Наук	PAGE	RUSS. PAGE
Program for the Building Up of Communism .....	1611	1725
INORGANIC AND ANALYTICAL CHEMISTRY		
Reactions in the Solid Phase of Silica with Oxides of Rare Earth Elements ( $\text{La}_2\text{O}_3$ , $\text{Nd}_2\text{O}_3$ , $\text{Gd}_2\text{O}_3$ ). É. K. Keler, N. A. Godina, and E. P. Savchenko.....	1613	1725
Reactions in the Solid Phase between Silica and Praseodymium Oxide. É. K. Keler, N. A. Godina, and E. P. Savchenko .....	1619	1735
PHYSICAL CHEMISTRY		
An Investigation of the Structure and Reactivity of Some Stable Radicals, M. B. Neiman and A. L. Buchachenko.....	1624	1742
Polarographic Study of the Effect of Temperature on the Protonation Rate of the Maleic Acid Di-anion. S. G. Mairanovskii and L. I. Lishcheta.....	1631	1749
The Inductive Effect in the Oscillational Frequencies of the Bonds Ge-H and Ge-D. V. A. Ponomarenko, G. Ya. Zueva, and N. S. Andreev .....	1639	1758
The Effect of the Thermodynamic Isotope Effect on the Distribution of Isotopic Molecules. G. A. Skorobogatov.....	1644	1763
ORGANIC AND BIOLOGICAL CHEMISTRY		
Tautomerism and Geometric Isomerism of Nitrogen-Containing Derivatives of Carbonyl Compounds. Communication 5. Polarographic Study of Semicarbazones and Thiosemicarbazones of Aromatic Aldehydes. Yu. P. Kitaev, G. K. Budnikov, and A. E. Arbuzov.....	1652	1772
Preparation of (Ethylcyclopentadienyl)manganese Tricarbonyl. A. N. Nesmeyanov, K. N. Anisimov, and Z. P. Valueva.....	1659	1780
Synthesis and Study of the Reactivity of Polymerizable Organometallic Derivatives of p-Vinylbenzoic Acid. M. M. Koton and T. M. Kiseleva.....	1662	1783
Telomerization of Dimethylcyclosiloxanes. Communication 3. Telomerization Reactions with Dichloromethylvinylsilane and Dichloromethylphenylsilane. K. A. Andrianov and V. V. Severny.....	1666	1788
Reaction of Trialkyl (or Aryl) Silanols with (Ethoxymethylallyl)methyl Dimethylphosphinates. K. A. Andrianov and I. K. Kuznetsova .....	1670	1792
Rearrangement Occurring in the Dehydrochlorination of 1,1- and 1,2-Bistrichlorosilyl-1,2- dichloroethanes with Aluminum Chloride. V. F. Mironov and V. V. Nepomnina.....	1673	1796
Synthesis of Surface-Active Substances from $\omega$ -Chloro Carboxylic Acids. S. A. Dmitriev, N. M. Karavaev, and A. V. Smirnova.....	1678	1800
Synthesis of 4,6,7,8-Tetrahydro-5-vinyl-2(3H)-naphthalenone and its Condensation with 2-Methyl-1,3-cyclohexanedione to Give 14 $\beta$ -Hydroxy-D-homo-19-androsta- 4,9(10)-diene-3,17 $\alpha$ -diene. N. N. Gaidamovich and I. V. Torgov .....	1682	1803

Available From Consultants Bureau

## CONTENTS (continued)

	PAGE	RUSS. PAGE
<u>Izvestiya Akademii Nauk SSSR</u>		
<u>Otdelenie Khimicheskikh Nauk</u>		
No 10, 1961		
Heterogeneity of Nitrolignin. A. A. Chuksanova, O. P. Grushnikov, and N. N. Shorygina.....	1688	1810
Raman-Spectrum Investigation of the Conformations of the Cyanohydrins of Some Cyclohexanone Derivatives. M. I. Batuev, A. A. Akhrem, A. V. Kamernitskii, and A. D. Matveeva.....	1691	1813
Stereochemistry of Heterocyclic Compounds. Communication 7. Steric Structures of Octahydro-4(1H)-quinolone Derivatives and the Configurations of Decahydro- quinolines. E. A. Mistryukov and V. F. Kucherov .....	1695	1816
Stereochemistry of Heterocyclic Compounds. Communication 8. Debenzylation and Stereosechemistry of Decahydroquinoline and Its Derivatives. E. A. Mistryukov and V. F. Kucherov.....	1702	1826
Chemistry of Acetals. Communication 8. Grignard Reactions with 1,1,3,3-Tetraethoxy- propane, 1,1,3,5,7,7-Hexaethoxyheptane, and 1,1,3,5,7,9,9-Heptaethoxynonane. L. A. Yanovskaya and V. F. Kucherov.....	1706	1830
Pyridine Bases Derived from 1-Buten-3-yne. Communication 7. Synthesis of Pyridine Bases by the Condensation of 2-Methyl-1-buten-3-yne with Ketones and Ammonia. I. L. Kotlyarevskii and E. D. Vasil'eva .....	1710	1834
Butadiyne Derivatives. Communication 9. Synthesis of Unsaturated Alkoxy and Alkylthio Acetals Having C <sub>7</sub> -C <sub>15</sub> Carbon Chains in Their Molecules. A. V. Bogdanova, G. I. Plotnikova, and I. P. Yakovlev .....	1715	1841
Alkylation of Phenols with Compounds with Mixed Functions. Communication 3. Alkenylation of m- and p-Cresols with 3-Buten-1-ol. N. I. Shuikin, E. A. Viktorova, I. E. Pokrovskaya, and T. G. Malysheva .....	1720	1847
Alkylation of Phenols with Compounds with Mixed Functions. Communication 4. Alkenylation of m- and p-Cresols with 4-Penten-1-ol. N. I. Shuikin, E. A. Viktorova, I. E. Pokrovskaya, and T. G. Malysheva .....	1725	1851
Catalytic Synthesis of Nitriles. Communication 5. Conversion of Isoalkanols into Nitriles by Means of Ammonia. M. A. Popov and N. I. Shuikin.....	1729	1855
Determination of the Individual Hydrocarbon Composition of Tertiary Petroleums. Communication 6. Ligroin from Petroleum from the Shugurov Deposits. B. Le, F. A. Urmanceev, I. P. Lipatova, R. G. Bukharaeva, and I. A. Lamanova .....	1732	1858
Composition of the Butenes Formed in the Catalytic Dehydration of 2-Butanol. A. A. Balandin, E. I. Klabunovskii, and E. F. Litvin.....	1737	1863
Catalytic Hydrocondensation of Carbon Monoxide with Olefins and Their Hydropolymeriza- tion Under the Action of Carbon Monoxide and Hydrogen. Communication 33. Formation of Higher Hydrocarbons with a Nonmultiple Number of Carbon Atoms with Respect to the Original Olefin. N. I. Ershov, Ya. T. Éidus, and V. R. Erokhina .....	1744	1871
Catalytic Hydrocondensation of Carbon Monoxide with Olefins and Their Hydropolymeriza- tion Under the Action of Carbon Monoxide and Hydrogen. Communication 34. Mutual Transitions of the Reactions of the Formation of Hydrocarbons from Mixtures of Ethylene, Hydrogen, and Carbon Monoxide. Ya. T. Éidus, N. I. Ershov, and V. R. Erokhina .....	1747	1874
Composition of Products of the Bromination of 2-Thienyl Ketones in Presence of Excess of Aluminum Chloride. Yu. S. Vol'kenshtain, B. V. Lopatin, and V. A. Petukhov .....	1752	1879
<b>BRIEF COMMUNICATIONS</b>		
An Improved Method of Determining Surface Area by the Absorption of Air. A. L. Klyachko-Gurvich .....	1756	1884

Available From Consultants Bureau

## CONTENTS (continued)

Izvestiya Akademii Nauk SSSR  
Otdelenie Khimicheskikh Nauk  
 No 10, 1961

	PAGE	RUSS. PAGE
The Synthesis of Alkenylsilanes by the High-Temperature Condensation of Unsaturated Compounds with Silicon Hydrides. V. F. Mironov and V. V. Nepomnina . . . . .	1759	1886
The $\delta$ -Alloxyethyl n-Butyl Acetal of Acetaldehyde. A. K. Gorban' . . . . .	1761	1889
The Reaction of Poly-(vinyl Alcohol) with Poly-(methacrylic Acid). M. F. Shostakovskii, A. M. Khomutov, and N. M. Khomutova . . . . .	1763	1890
Phase Transformations in the Preparation of Ni-MgO Catalysts by the Decomposition of Oxalates in a Current of Hydrogen. V. M. Akimov, E. F. Litvin, A. M. Rubinshtein, and L. Kh. Freidlina . . . . .	1766	1892
The Production of Dialkylaluminum Hydrides from Dialkylaluminum Halides and Sodium Hydride. L. I. Zakharkin and I. M. Khorlina . . . . .	1768	1894
The Dichlorides of p-Styrylphosphorous and p-Styrylphosphonic Acids. M. I. Kabachnik and E. N. Tsvetkov . . . . .	1770	1896
The Decomposition of Phenyl diazonium Borofluoride in Nitrobenzene in the Presence of Zinc, Cadmium, and Silver Powders. L. G. Makarova and M. K. Matveeva . . . . .	1772	1898
The Oxidation of Low-Molecular-Weight Hydroxyl Compounds with Oxides of Nitrogen. N. Ya. Leshina, M. F. Denikeeva, and V. I. Ivanov . . . . .	1774	1899
1-Cyclopropyl-2- $\alpha$ -furylcyclopropane and Its Conversions. A. P. Meshcheryakov, V. G. Glukhovtsev, and N. N. Lemin . . . . .	1776	1901
The Magnetic Susceptibility of Derivatives of Salicylalimine and Some Other Organic Compounds. V. I. Belova and Ya. K. Syrkin . . . . .	1778	1903
Oxidative Polycondensation of Diacetylenes. I. L. Kotlyarevskii, L. B. Fisher, and E. S. Domnina . . . . .	1780	1905
Synthesis of Diquaternary Ammonium Salts of Hexamethylenediamine. M. F. Shostakovskii, V. P. Denisenko, and A. K. Gorban' . . . . .	1782	1907
Synthesis of 1,10-Decanedicarboxylic Acid from Cyclododecatriene-1,5,9. L. I. Zakharkin, V. V. Korneva, and G. M. Kunitskaya . . . . .	1784	1908
Fluorinated Monocarboxylic Acids. I. L. Knunyants, Li Chai-Yuan, and V. V. Shokina . . . . .	1785	1910
Use of the Reaction between Dilithioorganic Compounds and Metal Halides to Synthesize Polymers with a Conjugated System of Double Bonds. V. Ya. Bogomol'nyi and B. A. Dolgoplosk . . . . .	1787	1912
Structure of the Complex Compounds of Diphenylboron Chloride with Primary Amines. B. M. Mikhailov and N. S. Fedotov . . . . .	1788	1913
Synthesis of DL-19-Nor-d-homotestosterone and Its 17 $\alpha$ -Alkylhomologs. S. N. Ananchenko, V. M. Rzhevnikov, V. N. Leonov, and I. V. Torgov . . . . .	1789	1913
General Meeting of the Division of Chemical Science of the Academy of Sciences, USSR . . .	1790	1915

Available From Consultants Bureau

BULLETIN OF THE ACADEMY OF SCIENCES OF THE USSR  
 Division of Chemical Science

Number 11

November, 1961

CONTENTS

Izvestiya Akademii Nauk SSSR  
Otdelenie Khimicheskikh Nauk

RUSS.  
 PAGE PAGE

Reactions Between $\text{Ce}_2\text{O}_3$ and $\text{SiO}_2$ at High Temperatures. A. I. Leonov, V. S. Rudenko, and E. K. Keier .....	1797	1925
Physicochemical Investigation of the Reaction Between Lanthanum Hydroxide and Hydrogen Peroxide. S. Z. Makarov, L. V. Ladeinova-Soboleva, and A. M. Chernyshova.....	1805	1933
Physicochemical Investigation of the Reaction Between Neodymium Hydroxide and Hydrogen Peroxide. S. Z. Makarov and L. V. Ladeinova-Soboleva ..	1811	1940
Adsorption of a Mixture of Gases. 6. Adsorption Equilibrium in the System Water n-Heptane - Silica Gel. B. P. Bering and V. V. Serpinskii .....	1817	1947
Mechanism of Dehydrogenation of Cyclohexane on the Crystalline $\alpha$ -Oxide of Chromium. A. A. Balandin and I. D. Rozhestvenskaya.....	1824	1955
Study of the Electrophilic Substitution Reaction at an Olefine Carbon Atom. 1. Reaction of Trans- $\beta$ -Chlorvinylmercury Chloride with Iodine in the Presence of Iodine Anion in Aqueous Dioxane. I. P. Beletskaya, O. A. Reutov, and V. I. Karpov .....	1830	1961
The Laws Governing the Effect of Inhibitors in the Oxidation of Polypropylene. Yu. A. Shlyapnikov, V. B. Miller, and E. S. Torsueva.....	1834	1968
The Determination of the Rate Constants of the Simple Reactions of Hydrogen Atoms. 1. The Rate Constant for the Recombination of $\text{H} + \text{H} + \text{H}_2 \rightarrow 2\text{H}_2$ and the Rate Constant for the Reaction $\text{H} + \text{O}_2 + \text{H}_2 \rightarrow \text{HO}_2 + \text{H}_2$ . L. I. Avramenko and R. V. Kolesnikova.....	1838	1971
Study of the Vibration Spectra of Methacrylic Acid Derivatives Containing Group IV Elements. L. A. Leites, Yu. P. Egorov, G. S. Kolesnikov, and S. L. Davydova.....	1844	1976
The Reaction of Organic Magnesium Compounds with (Ferrocenylmethyl)trialkylammonium Salts. A. N. Nesmeyanov, E. G. Perevalova, and L. S. Shilovtseva .....	1850	1982
The Synthesis of $\alpha$ -Chloro- $\omega$ -Sulfocarboxylic Acids. R. Kh. Freidlina, B. V. Kopylova, and A. N. Nesmeyanov.....	1853	1985
Solutions of Aromatic Organic Lithium Compounds in Ethers. T. V. Talalaeva, A. N. Rodionov, and K. A. Kocheshkov .....	1857	1990
Substitution Reactions of a Mercury Atom Combined with a Saturated Carbon Atom, by Halides. 2. Reaction of Benzylmercury Chloride with Iodine in the Presence of Iodine Ion in Dimethylformamide, Methanol, and Ethanol. I. P. Beletskaya, O. A. Reutov, and T. P. Gur'yanova.....	1863	1997
Reaction of Aryl(Alkyl)Aminomethylethoxyulanes with Alkyl(Aryl)Hydroxyulanes. K. A. Andrianov and L. M. Volkova .....	1888	2003

Available From Consultants Bureau

## CONTENTS (continued)

*Izvestiya Akademii Nauk SSSR.*  
Otdelenie Khimicheskikh Nauk  
 No 11, 1961

RUSS.  
 PAGE PAGE

Addition of Alkoxy silanehydrides to Unsaturated Nitriles and Hydrogenation of the $\omega$ -Cyanoalkylalkoxysilanes Obtained. V. M. Vdovin, R. Sultanov, T. A. Sladkova, L. Kh. Freidlina, and A. D. Petrov.....	1872	2007
Esters of $\beta$ -Ketophosphonic Acids. 8. Reaction of 2,6-Dibromocyclohexanone with Triethyl Phosphite. B. A. Arbuzov, V. S. Vinogradova, and N. A. Poleshaeva .....	1877	2013
Esters of $\beta$ -Ketophosphonic Acids. 9. Reaction of 2,6-Dibromo- and 2,6-Dichlorocyclohexanone with One and Two Moles of Triethyl Phosphite. B. A. Arbuzov, V. S. Vinogradova, and N. A. Poleshaeva .....	1884	2020
Synthesis of Diphenylinvinylphosphine Oxide. M. I. Kabachnik, T. Ya. Medved', Yu. M. Polikarpov, and K. S. Yudina.....	1891	2029
Isomerization of Free Alkyl Radicals in Solution. O. A. Reutov and T. N. Shatkina.....	1894	2032
Rearrangement of the Propyl Cation Formed by the Action of Nitrous Acid on Propylamine Perchlorate. O. A. Reutov and T. N. Shatkina.....	1900	2038
Stereochemistry of Heterocyclic Compounds. 9. Synthesis of O-Acetates of Isomeric Decahydro-4-Quinolinois and Study of the Possibility of O → N Migration in the Decahydroquinoline Series. E. A. Mistryukov and V. F. Kucherov .....	1905	2044
$\beta$ -Dicarbonyl Compounds. 11. Reaction of 2-Acylcycloalkanones with Hydrogen Peroxide. L. P. Vinogradova and S. I. Zav'yalov.....	1911	2050
Transformations of Butylphenols over Dehydrocyclization Catalysts. N. I. Shuikin, E. A. Viktorova, Li Shi, and F. A. Karakhanov .....	1914	2054
Catalytic Transformations of 1-Methylcyclohexene. N. I. Shuikin, E. D. Tulupova, and B. L. Lebedev .....	1918	2058
Determination of the Individual Hydrocarbon Composition of Gasolines of Tartary Petroleum. 7. Gasoline from Petroleum of the Shugurov Deposits. F. A. Urmancheev, B. Le, R. G. Bukharaeva, I. A. Lamanova, and I. P. Lipatova .....	1922	2063
Free-Radical Addition of Cyclopentanone and Cyclohexanone to $\alpha$ -Olefins and Allyl Ether. G. I. Nikishin, G. V. Somov, and A. D. Petrov.....	1925	2065
Vinyl Compounds in the Diene Synthesis. 8. Diene Condensation of Vinyl Ethers and Sulfides with Anthracene. M. P. Shotakovskii, A. V. Bogdanova, and A. N. Volkov.....	1930	2072
Synthesis and Polymerization of Diallyl Tartrate. M. P. Shotakovskii, A. M. Khomutov, I. A. Chekulaeva, and N. M. Khomutova.....	1933	2076
<b>BRIEF COMMUNICATIONS</b>		
Complexes of Decaborane with Organic Phosphorus and Arsenic Compounds. L. I. Zakharkin and V. I. Stanko .....	1936	2078
Reaction of Tetrahydrofuran and Tetrahydropyran with Trimethylbromoethane and Trimethylchlorosilane. L. I. Zakharkin, V. I. Stanko, and V. A. Brattsev....	1938	2079
Hydrogen Isotope Effect in Primary Alkyl Chlorides in the Presence of Aprotic Acids. V. N. Setkina, D. N. Kursanov, S. V. Vitt, and N. S. Martinkova....	1940	2081
Reaction of Decaborane and Pentaborane with Mercaptans and Sulfides. L. I. Zakharkin, V. I. Stanko, and O. Yu. Oklobystin.....	1942	2083
Synthesis of Some Dialkylamine-boranes and Alkyldimercapto-(dialkylamino) Boranes. B. M. Mikhailov and V. A. Dorokhov.....	1944	2084
Reaction of Tetrahydrolivane and Silvane with Sulfur. N. I. Shuikin and V. V. Ab. Volumetric Termination in Microdetermination of Carbon and Hydrogen after Decomposition of Organic Substances by Combustion in a Stream of Oxygen. V. A. Klimova and G. F. Antsimeva .....	1946	2086
1948	2088	

Available From Consultants Bureau

## CONTENTS (continued)

	<u>Izvestiya Akademii Nauk SSSR,</u>	<u>Otdelenie Khimicheskikh Nauk</u>	<b>RUSS. PAGE</b>
	No 11, 1961		<b>PAGE</b>
<b>Heat Conduction of 2,4,6-Trinitrotoluene in the Solid and Liquid States.</b> G. B. Ravich and Yu. N. Bursev.....	1951	2091	
<b>Neutronographic Study of Carbides and Nitrides of Titanium.</b> M. S. Gorbunov, N. A. Shishakov, G. G. Sadikov, and A. A. Babad-Zakhryapin.....	1953	2093	
<b>The Reactions of Alkenyl- and Alkylermanium Chlorides with Hydrogen Bromide.</b> V. F. Mironov, N. G. Dzhurinskaya, and A. D. Petrov.....	1956	2095	
<b>A New Method for the Synthesis of Macrocyclic Ketones.</b> L. D. Bergelson, Yul. G. Molotkovskii, and L. I. Il'yukhina.....	1959	2099	
<b>LETTERS TO THE EDITOR</b>			
<b>A New Method for Preparing Stereospecific Silica Gels.</b> E. I. Klabunovskii, L. M. Volkova, and A. E. Agronomov .....	1962	2101	
<b>Exchange Reactions Between Esters of Boric and Boroorganic Acids and Their Thioanalogs.</b> B. M. Mikhailov and L. S. Vasil'ev .....	1962	2101	
<b>The Synthesis of 3,3,3-Trichloro-1-Propene.</b> A. N. Nesmeyanov and R. Kh. Freidlina .....	1963	2102	
<b>N-<math>\delta</math>-Mercaptoethylation of Amino Acid Esters.</b> L. G. Bulavin .....	1963	2103	

Available From Consultants Bureau

PUBLISHED IN TRANSLATION BEGINNING  
WITH THE 1958 RUSSIAN VOLUME YEAR.

IZVESTIYA AKAD. NAUK SSSR

SERIYA GEOLOGICHESKAYA

1961

CONTENTS

No. 4, April

	Page
THE INTERNATIONAL 1:2,500,000 TECTONIC MAP OF EUROPE, by N. S. Shatskiy (deceased) and A. A. Bugdanov . . . . .	1
TRANSVERSE FAULTS CONTEMPORANEOUS WITH SEDIMENTATION AT THE CENTRAL AND WESTERN BOUNDARIES OF THE CAUCASUS, AND THE DISTRIBUTION OF MESOZOIC AND CENOZOIC FACIES, by V. Ye. Khain and M. G. Lomize. . . . .	17
ORIGIN AND STRUCTURE OF SWELLS IN THE RUSSIAN PLATFORM, by A. I. Mushenko. . . . .	31
STRATIGRAPHY OF MESOZOIC CONTINENTAL DEPOSITS IN THE BURYAT A.S.S.R. (WESTERN TRANSBAYKAL REGION), by Ch. M. Kolesnikov . . . . .	43
DISPERSED BITUMENS IN ALKALIC ROCKS OF THE KHIBINO PLUTON, by I. A. Petersil'ye and Ye. B. Proskuryakova . . . . .	55
METHODS	
APPLICATION OF ULTRASONIC TECHNIQUES IN MINERAL ANALYSIS OF SEDIMENTARY ROCKS, by V. D. Shutov, M. Ya. Kats, and V. V. Baranov . . . . .	65
REVIEWS AND DISCUSSIONS	
THE STRUCTURE OF THE NORTHERN TERMINAL OF THE ARCTIC URALS, by K. G. Voynovskiy-Kriger . . . . .	76
BIBLIOGRAPHY . . . . .	80
CHRONICLE	
PROBLEMS IN THE GEOLOGY OF ORE DEPOSITS AT THE TWENTY-FIRST SESSION OF THE INTERNATIONAL GEOLOGICAL CONGRESS, by V. I. Smirnov. . . . .	92

Available From American Geological Institute

**CONTENTS (Contd)**

Izvestiya Akad Nauk SSSR  
Seriya Geologicheskaya, No 4, 1961

THE TWELFTH GENERAL ASSEMBLY OF THE INTERNATIONAL VOL-	
CANOLOGIC ASSOCIATION, by V. I. Vladavets .....	95
THE NINTH SESSION OF THE COMMISSION ON ABSOLUTE DATING OF	
GEOLOGIC FORMATIONS, AT THE SECTION OF GEOLOGIC AND	
GEOGRAPHIC SCIENCES, THE U. S. S. R. ACADEMY OF SCIENCES,	
by T. B. Pekarskaya .....	98

Available From American Geological Institute

## NEWS OF HIGHER EDUCATIONAL INSTITUTIONS

MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR

## RADIOPHYSICS SERIES

Following is a translation of the Russian language journal Izvestiya Vyssikh Uchebnykh Zavodov MViSSO SSR, Radiofizika Gor'kiy, Vol V, No 1, 1962,  
pp 1-2Ch/

(Note: Illustrations are given at the end of each article.)

## CONTENTS

V. A. Udal'tsov Correlation Polarimeter for the 20th CW Band	1
Yu. A. Ryzhov; O. I. Yudin Effect of Irregularities in the Electron Concentration of the Ionosphere on Measurements of Some of its Parameters	20
V. A. Razin; N. M. Tseytlin Concerning the Measurement of the Radio Emission from the Atmosphere and the Earth's Surface	38
B. N. Gerskman; V. L. Ginsburg Several Remarks on the Propagation of Electromagnetic Waves in an Anisotropic Dispersive Medium	61
E. A. Kaner; Yu. A. Belov Penetration of an Electromagnetic Field in a Magnetoactive Plasma	96
V. F. Aleksin; K. N. Stepanov Contribution to the Theory of Electromagnetic Fluctuations in a Plasma	124
A. V. Men' Concerning the Hypothesis of the Transport of "Frozen" Turbulence in the Investigation of Fluctuations in an Inhomogeneous Medium	143

F. V. Bunkin On the Phenomenological Theory of Thermal Fluctuations in Macroscopic Systems	169
V. S. Grechishkin; I. A. Kyuntsev Distortion of the Nuclear Quadrupole Resonance Line Shape due to Apparatus Factors	201
F. I. Skripov (deceased); E. L. Altman Reaction of Receiving Circuit in Experiments on Free Nuclear Induction in Weak Magnetic Fields	220
A. M. Belyantsev; Yu. K. Bogatyrev Formation of Electromagnetic Shock Waves with Two Discontinuities	246
Yu. S. Korobkov; V. Ya. Eydman Reaction of Radiation of a Moving Charge in a Waveguide Filled with Anisotropic Dielectric	259
V. A. Malyshev Theory of Planar Diode with Homogeneous Cathode Operating in the Saturation Mode	272
N. V. Fleshivtsev Dependence of the Sputtering Coefficient of Copper on the Target Temperature, Current Density, and Angle of Incidence of Argon Ions with Energy 10 --30 kev	289
S. A. Akhmanov; Yu. A. Kravtsov Two-Circuit Generator with Nonlinear Capacitance	306
Z. Fridrikh Quantitative Estimates of Methods of Discretization	331
A. M. Goncharov; A. S. Tarantovich Semiconductor Switching System for Magnetic Drum Heads	352
G. G. Getmantsev Origin of Cosmic Radio Emission and Cosmic Rays	365
F. G. Bas; S. I. Khankina Energy Losses of a Particle Moving over an Ideal Conducting, Statistically Rough Surface	377

## CONTENTS (Contd)

JPRS 14,515

V. P. Shestopalov; I.P. Yakimenko; V. D. Fil'	
Propagation of Asymmetrical Electromagnetic Waves in a Plasma Rod and Their Radiation	379
V.P.Shestopalov; I.P.Yakimenko; V. Flekhnay	
Asymmetrical Electromagnetic Waves in a Helical Waveguide with Longitudinally Magnetized Ferrite	386
A. M. Belyantsev; L. A. Ostrovskiy	
Propagation of Pulses in Transmission Lines With Semiconductor Diodes	394
A. N. Didenko; Yu. A. Panov	
Calculation of Shunt Resistance and Q of Double- Row Type Slow-Wave Structures	406
G. N. Rapoport	
Approximation Method in Nonlinear Traveling Wave Tube Theory	413
I. G. Kozlov	
Effect of Velocity Distribution in an Electron Beam on the Operation of a TWT Amplifier	418
G. I. Rozhkova	
Non-Stationary Processes in a Resonant Circuit With Variable Parameters	426
Z. I. Uritskiy; Ye. N. Ivancev	
Contribution to the Theory of the External Photoemission from Semiconductors	434
A. S. Alekseev; G. P. Savin	
Device for Starting Durations Determination in Rhythrical Production of Several Articles Using the Same Equipment	440
V. N. Nikonov	
Letter to the Editor	446
Information; Conferences	447
Geomagnetism and Aeronomy v. 1, No 5, 1961 (abstracts of articles of interest to the readers of "Radiofizika")	450

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS  
 MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR  
 RADIO ENGINEERING SERIES

[Following is a translation of the Russian language  
 Journal *Voprosy Vysokich Ustroistv i Sredstv SVESO*  
so s poznaniem Radiotekhniki, Vol. 7, No. 1, Jan-Feb 1964,  
 Kiev, pp 1-140.]

Table of Contents

	<u>Page</u>
Voytko, V.I. Construction of Communism and Problems of Radio Electronics.....	1
Neyman, M. S. Progress in Radio Electronics and Its Principal Problems.....	10
Neyman, M. S., and Zemtsov, G. P. Investigation of Logical Elements for an Amplitude System for Sampled-Data Automation.....	21
Zokrinushkaya, A. A., and Bygdenov, G. B. Ferrite Thermal Resistors (Dynamic Characteristics) ..	44
Gerasimov, S. M. Design of Semiconductor Oscil- lator with External Excitation.....	68
Grigor'yev, N. A., Kats, L. I., and Feinring, Sh. E. Measurement of the Standing Wave Ratio with the Aid of a Directional Coupler and Phase Shifter in the Millimeter Band.....	87
Kigulin, I. N. Correlation Method of Estimating Quality of Transients in Linear Systems.....	97
Ielizarov, Yu. S. Experimental Investigation of a Helical Transformer for Nanosecond Pulses....	12
Kalmisiotiskiy, Yu. N., and Svedomikov, S. V. Switching Over Voltages in Germanium Diodes..	130

## CONTENTS (Contd) JPRS 14,401

Shirkin, N. M. In Phase and Out of Phase Dual Flat Ridges.....	153
Vollerner, N. F., Gutkin, N. G., and Terechuk, R. K. Ration Indicator for a Frequency Analyzer.....	
Frankin, L. Measurement of Small Changes in Inductance by Means of a Q-Meter.....	155
Ye. Bolayev, Yu. P. Calculation and Analysis of Accuracy of Printed Resistances as a Function of the Accuracy with which the Conducting and Resistive Elements Are Printed.....	199
Dvinskikh, V. A. Measuring Circuits with Self-Excitation.....	217
Totel'baum, Ya. I. Calculation of Ripple of Rectified Voltage Using a Capacitive Filter.....	231
Belkin, M. K. Parametric Amplifiers Using Semiconductor Diodes Without Idle Circuits.....	246

Short Communications

Stockhovtsev, N. A., and Prokhorov, E. D. Inductive Properties of a Double-Base Diode.....	274
Zyuke, A. S., and Buzdal'niksky, I. D. Interference Immunity of Systems for Signal Addition in Telemetry Reception.....	281
Yakovlev, S. A. Best Chebyshev Linearization of the Dependence of the Velocity of an Electron on the Voltage.....	290
Parayev, Yu. I. Self-Adaptive Quantization Threshold	300
Khaykin, Ye. M. Possibility of Time Sharing in Multi-Channel Communication Lines.....	309

# KINETICS AND CATALYSIS

*A translation of KINETIKA I KATALIZ,  
a publication of the Academy of Sciences of the USSR*

© 1962 CONSULTANTS BUREAU ENTERPRISES, INC.  
227 West 17th Street, New York 11, N. Y.

Vol. 2, No. 6

November-December, 1961

## CONTENTS

P A G E  
ENG. | RUSS.

Editorial .....	729	I
The Formation of Nitric Oxide in the Nitrous Oxide Decomposition Flame. A. I. Pozlovskii..	731	809
The Kinetics of the Oxidation of 1,2-Diphenylethane by Potassium Permanganate in Aqueous Solutions. V. L. Knorre and N. M. Emanuel' .....	738	816
Kinetics and Mechanism of the Reduction of Dianisylphenylcarbinol by Isopropyl Alcohol in H <sub>2</sub> SO <sub>4</sub> -H <sub>2</sub> O and HCl-H <sub>2</sub> O Media. G. V. Epple, V.P. Odintsova, and C. G. Entelis .....	743	821
Autocatalytic Phenomena in Reactions Involving Solids. Yu. V. Tsvetkov.....	749	827
Oxidation with Water and Water Vapor of the Iron Catalysts Used for Synthesis of Organic Compounds from Carbon Monoxide and Hydrogen. A. Ya. Rozovskii, A. N. Bashkirov, Yu. B. Kagan, and E. G. Pokrovskaya .....	752	830
Chemical Reactions of Gases with Solid Bodies in a Fluidized Bed. A. L. Rozental' .....	759	838
Magnetic Properties of a Layer of Adsorbed Atoms. E. L. Nagaev.....	768	847
Anodic Oxidation of Sulfur Dioxide on Gold and Platinum-Gold Alloys. K. A. Lezhneva, T. I. Borisova, and M. G. Slin'ko .....	775	854
Study of the Structure of Vanadium-Molybdenum Oxide Catalysts by the EPR Method. V. B. Kazanskii, Z. I. Ezhkova, A. G. Lyubarskii, V. V. Voevodskii, and I. I. Ioffe .....	783	862
Investigation of Catalytic Activity of Ferrochrome Catalysts in the Interaction of Carbon Monoxide with Water Vapor. M. I. Markina, G. K. Boreskov, F. P. Ivanovskii and B. G. Lyudkovskaya .....	788	867
Sorption of Organic Substances on the Sulfonic Acid Cationite KU-2. T. I. Andrianova .....	795	874
Surface Adsorption Properties of Crystalline Titanium Oxide. L. G. Ganichenko, V. F. Kiselev and V. V. Murina.....	800	877
The Formation of the Porous Structure of Aluminosilicate Catalysts Under the Action of Surface Active Reagents. K. V. Topchieva, T. V. Antipina, Li Khe-Suyan and E. A. Leont'ev .....	808	887
The Catalytic Dehydrogenation of Cyclohexene and Cyclohexadiene-1, 3 on Platinum Films at 20°. V. M. Gryaznov and V. I. Shimul's .....	815	894
Kinetics of the Dehydrogenation and Dehydration of Ethyl and Isopropyl Alcohols on Yttrium Oxide. A. A. Balandin, I. R. Konenko and A. A. Tolstopiatova .....	821	900

Available From Consultants Bureau

## CONTENTS (continued)

Kinetika i Kataliz,  
Vol II, No 6, 1961

	RUSS.	PAGE
Vapor Phase Catalytic Ketonation of $\text{CH}_3\text{COO}^-$ Over Oxides of Quadrivalent Metals and $\text{BeO}$ . V. I. Yakerson, E. A. Fedorovskaya, A. L. Klyachko- Gurvich, and A. M. Rubinshtein.....	828	907
Molybdenum and Tungsten Oxide Modification of Copper Catalysts for Oxidizing Propylene to Acrolein. N. I. Popova, R. N. Stepanova and R. N. Stukova .....	836	916
Decomposition of $\text{H}_2$ ogen Peroxide on Silver Surfaces Modified by Chlorine Ions. P. Bliznakov and D. Lazarov .....	840	920
Method of Studying Reaction Kinetics on Catalysts in a Nonstationary State. G. P. Korneichuk, V. P. Ushakova and T. G. Skorbilina .....	849	931
Application of the Circulating-Flow Method to a Study of the Kinetics of Heterogeneous Catalytic Reactions in the Liquid Phase. S. L. Kiperman and N. V. Nikolaeva .....	853	936
 LETTER TO THE EDITOR		
Detection of Atomic Hydrogen in a Rarefied Flame of a Moist $\text{CO} + \text{O}_2$ Mixture by EPR. V. V. Azatyan, L. A. Akopyan and A. B. Nalbandyan .....	857	940
Author Index, 1961.....	864	
Table of Contents, 1961 .....	861	

Available From Consultants Bureau

# COLLOID JOURNAL

Volume 23, Number 5

September-October, 1961

## CONTENTS

<u>Kolloidnyi Zhurnal</u>	<u>RUSS.</u>	<u>PAGE</u>
Adsorption and Heat of Adsorption of Isomeric Butanols on Graphitized Carbon Blacks N. N. Avgul', A. V. Kiselev, and I. A. Lygina .....	429	513
Emulsion Method of Extracting Colloidal Mixed Uranyl Ferrocyanide from its Hydrosols. V. I. Borisikhina, L. D. Skrylev, and S. G. Mokrushin .....	436	521
Determination of the Discharge and Rate of Movement of Water in Porous Media by Means of Radioactive Tracers. M. P. Volarovich, N. I. Il'in, and N. V. Churaev .....	439	524
Effect of Electrolytes on Critical Micelle Concentration and Solubilizing Capacity of Sodium Laurate Solutions. P. A. Demchenko .....	442	528
Effect of Molecular Weight of Sodium Naphthenates and Salts of Synthetic Fatty Acids on the Solubilization of Hydrocarbons. P. A. Demchenko .....	444	531
Disjoining Pressure of Electrolyte Solutions on Polarized Mercury. B. V. Deryagin, A. V. Gorodetskaya, A. S. Titievskaya, and V. N. Yashin .....	447	535
Adhesion of Powder Particles to Plane Surfaces. B. V. Deryagin and A. D. Zimon .....	454	544
The Heat of Adsorption of Water Vapor on Hydrated and Dehydrated Silica Gels. O. M. Dzhigit, A. V. Kiselev, and G. G. Muttik .....	461	553
Investigation of Internal Stresses on Hardening of Polyester Resin. P. I. Zubov, L. A. Lepilkina, T. P. Gil'man, and A. Z. Leites .....	469	563
Formation of Porous Structures in Alumina-Silica Gels. 1. The Role of Syneresis in the Formation of Porous Aluminosilicates. E. M. Kaganova, T. E. Shakhova, and A. E. Panitkova .....	473	568
Infrared Study of the Adsorption of Benzene and Hexane on Silica. A. V. Kiselev and V. I. Lygin .....	478	574
Adsorptive Properties of Oxidized Carbon Blacks. 1. Oxidation of Channel Black in Water. A. V. Kiselev, N. V. Kovaleva, and A. Ya. Korolev ..	485	582
Radiotracer Method of Determining the Adsorptive Capacity and Specific Surface Area of Phosphate Coatings. V. S. Lapatukhin and Yu. M. Ovchinnikov .....	494	592
Structuration Processes in Cement-Reinforced Terrains. T. Yu. Lyubimova and T. V. Yagodovskaya .....	497	596
Investigation of Changes in the Strength of Argillaceous Rocks on Electrochemical Treatment. N. I. Maksimova, N. N. Serb-Serbina, N. I. Titkov, and A. S. Korzhuev .....	505	605
Infrared Spectroscopic Investigation of the Structuration Properties of Polymers. G. L. Maslenkova .....	514	615
Sulfonated Elastomers as Sorbents of Weak Electrolytes. O. R. Skorokhod .....	520	621

Available From Consultants Bureau

## CONTENTS (continued)

Kolloidnyi Zhurnal  
Vol XXIII, No 5, 1961

RUSS. PAGE PAGE

Effect of n-Decyl Alcohol and Polyisobutylene Additions on Elastic Recoil and Structural Strength in the Rijening and Aging of Aluminum Naphthenate Gel. A. A. Trapeznikov .....	524	626
Kinetics of the Structuration of Polymer-Cements. Yu. S. Cherkinskii and V. M. Kalashnikova.....	533	632
LETTER TO THE EDITORS		
Dependence of the Mean Molar Heat Capacity of an Adsorbate Upon the Differential Heat of Adsorption, G. I. Berezin, A. V. Kiselev, V. A. Sinitin ..	534	638

Available From Consultants Bureau

# RUSSIAN CASTINGS PRODUCTION

Complete English Translation of Russian  
Foundry Journal

LITEYNAYE PROIZVODSTVO, No 1, 1962

Published with the support of the Department of Scientific and Industrial Research by

THE BRITISH CAST IRON RESEARCH ASSOCIATION

Director: H. MORROGI

Publications Officer: M. R. THIBAULT

Editorial: G. V. RILEY

Translator: E. BISHOP, B.Sc. (TECH.)

JANUARY 1962

Gagarin meets foundrymen at the Stankolit work <i>A. I. Oufriev</i>	1
Advanced foundry techniques at the Exhibition of the achievements of the national economy <i>I. B. Zadzishek</i>	1
Casting bronze bushes by solidification under pressure <i>A. A. Rychikov and G. I. Timofeev</i>	4
Use of zircon concentrates in castings production <i>K. M. Tkachenko and M. S. Lipman</i>	7
Apportionment of indirect costs in foundries <i>S. Ya. Gershtenbern</i>	8
Automatic squeeze moulding line at the Kirov works <i>V. G. Rats and G. M. Yafet</i>	12
Self-propelled exhaust hoods over knock-out gratings <i>I. T. Alashev and A. K. Kruchkovskii</i>	16
Automatic control system for charging sand hoppers <i>I. S. Eremin and L. S. Panasyuk</i>	17
Machines for the centrifugal casting of bushes <i>D. M. Litvin and N. N. Morozov</i>	19
Instrument for determining the flowability of moulding sands <i>N. V. Afanas'ev and V. F. Kosyakov</i>	21
Method of calculating the forces required to open chill moulds and extract metal cores <i>N. P. Dubinin and V. A. Komissarov</i>	22
Influence of metal-mould reactions on the formation of burn-on <i>E. I. Markhasev and E. S. Lugovskaya</i>	25
Form of graphite in malleable iron <i>G. Yu. Shul'te and P. N. Bidulya</i>	28
Cavitation resistance of cast austenitic steels <i>I. N. Bogachev and R. I. Mints</i>	30
Effect of blast preheat and coke consumption on the cupola melting process <i>M. K. Sin</i>	33
Exchange of experience:	
Causes of porosity on the working surfaces of cast iron tractor liners	37
Problem of using anodized aluminium chill moulds	38
Washing cupola gases at the Gor'kii automobile works	38
The SUP-1 and SUD-1 level indicators	40
Zircon anti-burn-on dressing	41
Repair of defects in iron castings by welding	41
Book reviews:	
Casting processes	42
Castings production bibliography	43
Letters to the editor:	
Exothermic risers for steel castings	44
Production of cupola-melted magnesium-treated iron	45
Further remarks on technical terminology in the foundry industry	45

# MICROBIOLOGY

*A translation of Mikrobiologiya*

(Russian Original Dated November-December, 1961)

ol. 30, No. 6, pp. 795-952

May-June, 1962

## CONTENTS

	PAGE	RUSS. PAGE
Dynamics of Change in the Amino Acid Content of the Nutrient Medium During Cultivation of <i>Actinomyces citreofluorescens</i> . A. M. Bezborodov.....	795	977
Study of Bacterial Processes of Underground Oxidation of Hydrocarbons. G. P. Slavina.....	802	985
Study of Carbohydrate Metabolism of Bottom Yeasts in Continuous Production of Beer. M. T. Denshchikov, S. S. Rylkin and A. U. Zhvirblyanskaya.	806	990
Technique of Cultivation of Some Marine Forms of Diatoms under Laboratory Conditions. S. V. Goryunova and M. N. Ovsyannikova.....	810	995
Frequency of one of the Pigment-Formation Mutations in <i>Bacterium prodigiosum</i> ( <i>Serratia marcescens</i> ) at Different Stages of the Life Cycle. A. A. Prozorov..	812	998
Adaptation of Yeast to Pentoses. VI. Growth Properties of <i>Candida tropicalis</i> SD 5 on Medium Containing d-Ribose. Yu. N. Karasevich .....	816	1003
Cytological Study of a Synchronously Dividing <i>Escherichia coli</i> "B" Culture. V. I. Biryuzova and E. S. Nikitina .....	822	1011
Electron Microscope Study of the Morphology of Some Actinophage Strains. Ya. I. Rautenshtein and F. Makh .....	826	1016
A Method for Obtaining Phage-Lysates of <i>Escherichia coli</i> C <sub>D</sub> with High Initial Titers. T. I. Tikhonenko, Yu. P. Vinetskii and E. V. Zemtsova.....	831	1020
Antibiotic Properties of Dendrodochim. V. I. Bilai.....	834	1023
Effect of Disinfectants on the Biochemical and Serological Properties of the Colon Bacillus. A. M. Malchenkov .....	838	1028
Effect of Fertilizers on Root Microflora of Winter Wheat. S. A. Samtsevich and V. N. Borisova .....	842	1033
Reproductive Rate of Azotobacter Cells in Soil. Yu. O. Darznick.....	849	1042
MICROBIOLOGY		
Toxin Formation in the Soil by Some Fungal Species of the Genus <i>Penicillium</i> . T. G. Mirchink and K. P. Gershnykh.....	851	1045
Concerning the Effect of the Herbicide 2,4-D on Soil Microorganisms. A. M. Il'in.....	855	1050
Errors in the Study of Soil Microflora Inoculated into Solid Nutrient Media. A. E. Vitgeft .....	857	1052
Observations on Development of a Vinegar Plant Bacterial Culture. M. S. Loitsyanskaya, L. L. Lisenkova, and M. M. Robinson ..	863	1050
Method of Determining Acid Tolerance of Wine Yeasts. L. V. Tyurina.....	867	1066
Fractionation of Spores by Centrifugation. K. N. Shestoboev.....	870	1070
Microbiological Investigation of the Carpathian Sulfur Beds. VI. Utilization of Dispersed Organic Matter of Sedimentary Rocks for Sulfate Reduction. V. N. Ryzhova and M. V. Ivanov .....	874	1075

Available From American Institute of Biological Sciences

## CONTENTS (continued)

	RUSS. PAGE	PAGE
<b>Mikrobiologiya</b> Vol XXX, No 6, 1961		
Occurrence of Sulfur Bacteria in Fresh Waters and Their Place in the System of Kolwitz and Marsson Indicator Organisms. A. G. Rodina.....	878	1080
Mycoflora of Sapropels of L. Bolshoe Svatoe, Vitebsk Region, Belorussian SSR. T. G. Zimenko, E. S. Gurinovich, and I. V. Kabailova.....	881	1084
Microbial Indicators of Organic Pollution of Waters Polluted by Industrial Effluents. III. Taxonomy of Filamentous Bacteria. A. S. Razumov.....	884	1088
Teaching of Agricultural Microbiology in Russia (Historical Sketch). A. I. Metelkin ...	890	1097
<b>SURVEY</b>		
The Blue-Green Algae. M. V. Gusev.....	897	1108
<b>BOOK REVIEW</b>		
Ecological Properties of Nodule Bacteria in the Armenian SSR. A. P. Petrosyan.....	912	1129
Azotobacter and Its Use in Agriculture. L. I. Rubenchik.....	915	1131
<b>CURRENT EVENTS</b>		
First All-Union Conference on the Cultivation of Unicellular Algae. L. K. Osnitskaya and S. V. Goryunova.....	918	1135
Comments on Microbiological Section of Abstracting Journal "Biologiya.".....	921	1139
Defense of Dissertations .....	923	1141
<b>INDEX TO VOLUME 30</b>		
Author Index, 1961 .....	931	
Tables of Contents, 1961 .....	937	

Available From American Institute of Biological Sciences

Radiokhimiya, Vol II, No 4, 1960  
 Full Translation by AEC-tr-4576 (PL-480) PST No 565

Table of Contents

	Russian page	English page
Nikol'sev, A.V., S.M. Shubina, and N.M. Sinit'syna. Extraction of a mixture of radioactive isotopes with esters of butylphosphinic acids	3	1
Shevchenko, V.B. and I.A. Fedorov. The effect of temperature on the extraction of uranyl-, plutonium-, ruthenium-, and zirconium-nitrate with tributyl phosphate	6	4
Adamskii, N.M., S.M. Karpacheva, I.N. Mel'nikov, and A.M. Rosen. The effect of temperature on the extraction of nitric acid with tributyl phosphate	13	12
Rozovskaya, N.G. Sorption of radioactive elements by glass	20	19
Vdovenko, V.M., E.V. Stroganov, and V.N. Zandin. The structure of uranyl nitrate hexahydrate	24	23
Gurevich, A.M., L.D. Preobrazhenskaya, E.V. Komarov, and N.P. Osicheva. A spectrophotometric study of the system $\text{UO}_2(\text{NO}_3)_2\text{-ROH-H}_2\text{O}_2\text{-H}_2\text{O}$	32	31
Konstantinov, B.P., B.P. Kiselev, and G.P. Skrebtsov. The separation of radium from barium by exchange between amalgam and solution	44	43
Konstantinov, B.P., B.P. Kiselev, and G.P. Skrebtsov. The separation of radium from barium by electrolysis at a mercury cathode	50	50
Shvedov, V.P., and Fu I-Bei. The separation of radioactive isotopes at a mercury cathode. I. The study of the electrochemical behavior of europium	57	58
Shvedov, V.P., and A.V. Stepanov. Separation of rare-earth elements by continuous electrophoresis. II. Separation by means of ethylene diamine-tetraacetic acid	65	67
Preobrazhenskii, B.K., and Yu. P. Saikov. Separation of groups of elements by ion exchange. III. Elements of the copper group	68	70
Preobrazhenskii, B.K., V.P. Tselikhovskii, and V.N. Mel'nikov. Separation of groups of elements by ion exchange. IV. Elements of analytical group III	73	75
Grinberg, A.A., A.M. Trofimov, and I.N. Stepanova. Determination of the charge of polynuclear complex ions of ruthenium by the method of ion exchange	78	80
Lavrukina, A.K., and S.S. Rodin. Radiochemical investigation of products of uranium fission by 500 Mev protons	83	85
Isabaev, E.A., E.P. Usatov, and V.V. Cherdyn'tsev. Isotopic composition of uranium in natural samples	94	97
Isabaev, E.A., U.Kh. Asylbaev, and V.V. Cherdyn'tsev. An investigation of actinium in natural system	98	101
Zolotavin, V.L., and I.K. Ponomareva. Determination of radioactive strontium in open-water reservoirs	104	107
Andreeva, O.I., and A.I. Il'ina. Production of elementary carbon labeled with C <sup>14</sup>	107	111
Colutina, M.M., and E.A. Tikhomirova. Determination of radioactive admixtures in preparations of germanium-71 and the production of radiochemically pure germanium-71	112	117
Levin, V.I., N.G. Serebryakov, and I.V. Meshcherova. Preparation of silver-111 from palladium irradiated with neutrons	120	125
Zolotov, Yu. A. Problems in the chemistry of actinides at the International Congress on Pure and Applied Chemistry	127	132
Letter to the Editor		
Dashkevich, L.B. The concept of molecular radioactivity in the synthesis of materials labeled with radioactive isotopes	129	135
Rules for authors		
	130	137

Available From Office of Technical Services

Radiokhimiya, Vol-II, No 2, 1960  
 Full Translation by AEC-tr-4576 (PL-480) PST No 566

	Table of Contents (Contd)	Russian page	English page
<b>V.I. Lenin and science</b>			
<b>The seventieth birthday of Vitalii Grigor'evich Khlopin</b>		133	141
<b>Melikhov, I.V., Chiu Hsiao-Si, and M.S. Merkulova.</b> The microcomponent coprecipitation during the crystallization of the macrocomponent from a supersaturated solution		137	140
<b>Grenshchikova, V.I., and R.V. Bryzgalova.</b> Studies on the coprecipitation of Am and Eu with lanthanum oxalate		144	153
<b>Grenshchikova, V.I., and R.V. Bryzgalova.</b> Studies on the coprecipitation of Y(III) with lanthanum oxalate		152	162
<b>Bykovskii, D.I., and A. A. Grinberg.</b> Coprecipitation of trivalent cerium with uranium oxalate		159	169
<b>Klokman, V.R., K.G. Myakishev, and V.S. Smirnov.</b> Study of the effect of complex formation in a melt on the coefficient of crystallization in the systems $\text{PbCl}_2\text{-ThXCl}_2\text{-KCl}$ and $\text{CaCl}_2\text{-CdCl}_2\text{-KCl}$		164	174
<b>Semoliov, O.Ya., and V.I. Tikhimirov.</b> Salting-out and exchange of water molecules nearest to ion in aqueous solutions		175	185
<b>Zolotov, Yu. A.</b> The nonmonotonic variation of chemical properties of oxygen-containing ions of pentavalent actinides with increase of the atomic number of the element		183	194
<b>Panova, M.G., V.I. Levin, and N.E. Brezhneva.</b> Study of complex formation of yttrium. I. Yttrium oxalates		192	204
<b>Panova, M.G., N.E. Brezhneva, and V.I. Levin.</b> Study of complex formation of yttrium. II. Sulfate, nitrate and chloride complexes		197	209
<b>Pushlenkov, M.F., G.P. Nikitina, and V.G. Voden.</b> Complex formation of uranyl nitrate with organic phosphorus compounds. II.		208	220
<b>Tserkovnitskaya, I.A., and A.K. Charykov.</b> A study of the possibility of separation of thorium from certain elements by extraction using the method of labeled atoms. I.		215	228
<b>Shvedov, V.P., and Fu-i-bei.</b> Separation of radioactive isotopes at a dropping mercury cathode. II. Study of the separation of rare-earth elements which are not stable in the bivalent state		222	236
<b>Shvedov, V.P., and Fu-i-bei.</b> Separation of radioactive isotopes at a dropping mercury cathode. III. Study of cerium separation		231	245
<b>Probrashenskii, B.K., A.V. Kalyamin, and O.M. Lillova.</b> The effects of the molecular size of the complex-forming agent and the temperature on the ion-exchange separation of the radioactive rare-earth elements		234	249
<b>Bobrova, V.N.</b> The existence of double sulfates of potassium and barium		243	258
<b>Mikhailin, A.D., and N.N. Postnikov.</b> Preparation of labeled carbon from radioactive carbon dioxide		249	261
<b>Grinberg, A.A., and V.E. Mironov.</b> Ligand exchange in $\text{HgX}_4^{2-}$ ions		255	264
<b>Permyakov, V.M.</b> A comparative evaluation of the methods of preparation of radium-beryllium neutron sources		255	270
<b>Brief Communication</b>			
<b>Starik, I.E., Kh. A. Arslanov, and A.P. Zharkov.</b> The scintillation technique for natural radiocarbon counting and its application to the determination of the absolute age		259	274
<b>Letter to the Editor</b>			
<b>Shvedov, V.P., and A.V. Stepanov.</b> Corrected values for the instability constant of the complex compounds of certain lanthanides with the ethylene-diamine tetracetic acid anion		276	276
<b>Author Index to Nos 1 and 2</b>		278	278
<b>Subject Index to Nos 1 and 2</b>		280	280
<b>List of Abbreviations</b>		282	282

**Available From Office of Technical Services**

# TELECOMMUNICATIONS AND RADIO ENGINEERING

## PART II: RADIO ENGINEERING

Radiotekhnika

---

1962

VOLUME 17

NUMBER 1

---

### CONTENTS

	Page
V. S. Mel'nikov: Ideal Reception with Phase Telegraph Signal Prediction during Fading . . . . .	1
M. I. Dorman: Reaction of an Inertial System to Zero Beats . . . . .	11
V. A. Solov'yev: Delay Lines with Distributed Constants for Nanosecond Pulse Circuits. . . . .	21
A. M. Starodubtsev: Computation of Optimum Parameters of Ferrite Systems Operating on the Faraday Effect . . . . .	31
A. L. Fel'dshteyn and Ye. S. Zhavoronka: Design of Chebyshev Directional Couplers with Weak Coupling . . . . .	39
M. A. Berg and S. A. Garyainov: Experimental Investigation of the Switching Region in Two-Electrode Semiconductor Devices with Negative Resistance and p-n-p-n Type Structure . . . . .	51
Z. M. Lifshits, G. M. Moskovskaya and I. S. Libman: New Power Modulator Triodes . . . . .	59
V. I. Siforov and G. B. Linkovskiy: Statistical Estimation of the Reliability of "Aging" Devices . . . . .	62
V. V. Tsvetnov: Threshold Sensitivity of Ideal Phase- Measuring Loops . . . . .	68
Brief Communications . . . . .	76
S. E. Khaikin (On his Sixtieth Birthday) . . . . .	78
New Books . . . . .	80

Available From American Institute of Electrical Engineers

# TELECOMMUNICATIONS AND RADIO ENGINEERING

## PART II: RADIO ENGINEERING

Radiotekhnika

---

1962

VOLUME 17

NUMBER 2

---

### CONTENTS

	Page
N. F. Vollerner, N. G. Gatkin and M. I. Karnovskiy: Noise Immunity of a Receiver Generating a Set of Measurements of the Autocorrelation Function . . . . .	1
B. A. Varshaver: A Comparison of Methods of Receiving Discrete Signals . . . . .	8
V. I. Tikhonov and Ye. I. Kulikov: Distribution of Over-shoots and Maxima of Fluctuations . . . . .	12
V. I. Kulya: Predistortion and Filtering in a Channel with Variable Parameters . . . . .	21
M. Ye. Zhabotinskiy and Yu. L. Sverdlov: Design of a Multi-Stage Frequency Multiplier . . . . .	28
O. N. Litvinenko: Pulse Shaping by Parabolic Lines . . . . .	39
S. V. Pervachev: Investigation of the Locking Operation of an Automatic Tracking Circuit . . . . .	48
I. P. Stepanenko: Computation of Shunts and Additional Resistors for Semiconductor Diodes Connected in Series and in Parallel . . . . .	54
V. S. Davydov and A. M. Romanov: Transmission of Pulse Signals and Noise Through a Two-Stage Amplifier with Detuned Stages . . . . .	61
I. M. Zhlobinskiy and L. G. Sodin: A Method to Shorten the Analysis Time of Discrete Radio Signal Spectra by the "Active" Analysis Method . . . . .	67
New Books . . . . .	77

Available From American Institute of Electrical Engineers

# RADIO ENGINEERING AND ELECTRONIC PHYSICS

Radiotekhnika i Elektronika

NUMBER 12

1961

## CONTENTS

N.A. Esepkins et al., Investigation of the Radiation Characteristics of Highly Directional Mirror Antennas with Reflector of Alternating Profile . . . . .	1739
N.A. Armand, Fluctuations of the Thermal Radiation of the Atmosphere at Centimeter and Millimeter Wavelengths . . . . .	1753
V.N. Yakovlev, Use of the Method of Slowly Varying Parameters for an Investigation of Nonlinear Self-Oscillating Systems with Delay . . . . .	1766
M.I. Kontorovich, V. Yu. Petrun'kin, Smallest Number of Controllable Elements in an Antenna with Electric Beam Scanning. . . . .	1774
N.A. Kuz'min, T.V. Makarov, Electromagnetic Waves in a Rectangular Cross-Shaped Waveguide. . . . .	1781
Hsu Yen-cheng, Magnetostatic Oscillations of a Small Gyrotropic Spheroid Magnetized Perpendicular to the Axis of Rotation . . . . .	1790
I.P. Kotik, A.N. Sivov, Propagation of $H_{0n}$ Modes in Annular Waveguide with Dielectric Sheath and Metal Braid . . . . .	1796
L.N. Loshakov, Use of Lorentz Lemma for Approximate Calculation of the Propagation Constants in an Electronic Device Such as a Tube with Transverse Interaction	1802
S.N. Kornilov, Combination Noise in a Transit Klystron . . . . .	1807
S.N. Ivanov, N.E. Skvortsova, Yu.F. Sokolov, Frequency Properties of Negatively Biased Germanium Diodes with Welded Contacts . . . . .	1817
V.S. Bagaev, A.A. Zherebtsova, V.A. Pavlenko, Capacitance and Series Resistances of Germanium Diodes . . . . .	1824
V.L. Bonch-Bruevich, P.S. Serebrennikov, Volt-Ampere Characteristic of Tunnel Diode . . . . .	1828
L.N. Dobretsov, Concerning Thermionic Constants . . . . .	1841
A.A. Ostroukhov, Effect of Drain of Thermionic Current on the Temperature Mode of a Semiconductor Cathode . . . . .	1850
N.D. Morgul's, Yu.P. Korchevoi, Physical Properties of the Cesium Plasma in a Thermionic Energy Converter . . . . .	1859
V.P. Ignatenko, A.S. Myasinkov, Neutralization of Ion Space Charge by Electrons . . . . .	1868
BRIEF COMMUNICATIONS	
Yu.B. Sindler, Concerning the Accumulation of Noise and Fading in Radio Relay Communication Line with Long-Distance Tropospheric Propagation . . . . .	1876
P.Ya. Ufimtsev, Reflection of Circularly Polarized Radiowaves by Metallic Bodies . . . . .	1878
B.M. Minkovich, Symmetrical Diagrams Realized by a Round Radiating Aperture	1880
Ya.K. Trokhimenko, Dependence of the Properties of a Cavity Chain on the Displacement of the Slots in Adjacent Diaphragms . . . . .	1883
CONTENTS FOR 1961 . . . . .	
ERRATUM . . . . .	

Available From American Institute of Electrical Engineers

# RADIO ENGINEERING AND ELECTRONIC PHYSICS

Radiotekhnika i Electronika

NUMBER 1

1962

## CONTENTS

V.I. Siforov, Twenty-Second Congress of the Communist Party of the Soviet Union and the Problems of Radio Electronics . . . . .	1
A.I. Ressin, Efficiency Indices and Noise Immunity of Communication Systems with a Random Operator . . . . .	4
Ya.S. Itskhoki, Probability of an n-Fold Coincidence of Randomly Spaced Pulses with Random Period and Distribution of the Coincidence Period . . . . .	13
B.S. Tsybakov, Linear Information Coding . . . . .	22
Yu.S. Lezin, Effectiveness of a System Composed of a Frequency Filter and a Delayed Feedback Storage Unit . . . . .	34
V.I. Bunimovitch, and V.A. Morozov, Estimation of Frequency and Time of Arrival of a Signal with Unknown Parameters on a Background of White Noise . . . . .	40
Ya.N. Fel'd, Variational Method for the Calculation of Parameters Which are Linear Functionals of the Electrodynamic Integral Equations . . . . .	46
A.A. Pistolkors, Axially-Symmetric Self-Oscillations of a Gyrotropic Sphere of Small Radius . . . . .	53
V.P. Kovalev, Methods for Producing a Plane Electromagnetic Wave Under Laboratory Conditions . . . . .	62
M.D. Khaskind, Wave Diffraction from a Tape Placed on an Impedance Plane . . . . .	68
B.Ye. Kinber, The Role of Diffraction at the Edges of a Paraboloid in Fringe Radiation .	79
T.V. Makarov, Attenuation of Electromagnetic Waves Due to Losses in Walls of Cross Waveguides . . . . .	87
L.R. Yavich, Synthesis of Stepped Transition Units with Maximally Flat Frequency Characteristics . . . . .	93
Yu.A. Kravtsov, Oscillator with Parametric Feedback . . . . .	101
L.E. Bakhrakh and V.G. Medoks, Effect of Thermal Velocity Upon Blurring of Electron Beams . . . . .	107
G.V. Der-Shvarts and S.A. Belen'kiy, A Study of Aberration of Electrostatic Lens Filters . . . . .	112
S.M. Levitskiy and V.S. Gvozdetskiy, Effect of Constant Electrical Field Upon the Formation of a Superhigh Frequency Pulse Discharge in Gas . . . . .	117
F.M. Yablonskiy, Recovery of Electric Strength of a Two-Electrode Gap After a Glow Discharge . . . . .	125
V.S. Golubev, Deionization of Argon Plasma in a Magnetic Field . . . . .	134
<b>BRIEF COMMUNICATIONS</b>	
Yu.B. Sindler, Dynamic Programming Applied to Recording Weak Signal Levels by Inertial Dynamic Systems in the Presence of Noises . . . . .	142
K.Sh. Zigangirov, Expression for the Wald Distribution in Terms of Normal Distribution . . . . .	145
M.V. Butrov, Diffraction of Electromagnetic Waves by Intersecting Cylinders . . .	148
O.N. Litvinenko and V.I. Soshnikov, Synthesis of Heterogeneous Lines Based on Solution of the Inverse Sturm-Liouville Problem . . . . .	150
B.M. Minkovich, Application of Double Fourier Transform for Design of Plane-Aperture Antennas . . . . .	153
V.B. Kazanskiy and L.D. Stepin, A Method of Computing the Dielectric Constants of Substances Measured by the Use of a Cylindrical $H_01n$ Cavity, with the Samples in Axial Arrangement . . . . .	156
A.A. Rabinovich-Vizel' and M.E. Gertsenshteyn, The Passband of a Frequency Multiplier Using a Nonlinear Capacitance . . . . .	158
Yu.D. Chayka and S.Ya. Shata, Minimal Time Required for Transistor to Recover from Saturation . . . . .	161
G.S. Kreynina, Volt-Ampere Characteristic Maxima for Cathodes of the $Al-Al_2O_3$ -Ag Structure . . . . .	166

Available From American Institute of Electrical Engineers

Number 3  
March 1962

# STAL in English

Published by

THE IRON AND STEEL INSTITUTE

by arrangement with the Department of Scientific and Industrial Research

- \*165 Complex automation of production is the decisive factor in fulfilling the decisions of the party

## IRONMAKING

- 169 Operation of a blast-furnace with a volume of 1719 m<sup>3</sup> with injection of natural gas Z. I. Nekrasov et al.  
174 Travelling-grate machine for firing fluxed iron-ore pellets I. I. Rovenskii and N. N. Berezhnoi  
177 Operation of a blast-furnace with a volume of 1719 m<sup>3</sup> B. N. Zherchin et al.  
182 Blast-furnace stack lining life at the Magnitogorsk combine I. M. Galemin and L. A. Lepikhin

## STEELMAKING

- 185 Direction and manner of solidification in ingots of different shapes S. Ya. Skoblo  
189 Energy/power parameters of continuous steel casting plant I. I. Dobroskok et al.  
191 Converter steel refined in the ladle with liquid synthetic slag S. G. Voinov et al.  
196 Open-hearth furnace or oxygen-blown converter? A. F. Myrlysynov  
200 Tips made of carborundum bound with nitride for immersion thermocouples K. S. Kutateladze et al.

## ELECTROMETALLURGY

- 201 Melting stainless steels using magnesium alloy turnings V. P. Frantsov et al.

## FERROALLOYS

- 202 Production of 75% ferrosilicon in a rotating bath furnace V. N. Gusarov et al.  
204 Rational method of producing ferroaluminium S. F. Karp and A. P. Frunkin

## ROLLING AND TUBE PRODUCTION

- 205 Roll pass design for the economical SVP17 section for mine roof supports B. M. Shum  
208 Strip skidding conditions in rolls I. S. Pobedin et al.  
210 Methods of reducing thickness variations in cold rolled strip V. Kh. Faizullin and V. V. Kashintsev  
213 New designs for rolling mill transfer trolleys G. N. Krauze and V. I. Dunaev  
216 Reconstruction of the pendulum saw feed mechanism. L. N. Gorodetskii and A. L. Starosel'skii  
217 Replacement of rolling mill bronze shaft chocks with bimetallic chocks V. S. Popov et al.  
218 Experience in the application of automatic hard facing of the rolls on the 750 section mill L. T. Shepel' et al.

## METAL WORKING AND HEAT TREATMENT

- 219 Effect of cerium treatment on the nature of the crystallization of chromium-nickel steel Ya. E. Gol'dshtain et al.  
222 Improving the mechanical properties of light-weight sections of carbon and low-alloy steels E. Z. Freidenzon et al.  
224 New 1Kh18N2AG5 stainless steel D. A. Odesskii  
226 08kp steel used for bimetals S. F. Bakuma et al.  
227 Congress for coordinating scientific research into low-alloy steels I. M. Leikin and G. A. Torpanova

## ECONOMICS AND ORGANIZATION

- 229 Economic effectiveness of the redevelopment of iron- and steelworks V. B. Brodskii  
232 Book review: Accountancy and analysis of economic performance for an iron- and steelworks

## HEAT TECHNOLOGY

- 234 Accelerated heating of stainless steel ingots in centrally fired pits E. P. Blokhin et al.  
236 Gas-fired furnaces for heating tubular blanks

## SMALL COMPONENT PRODUCTION

- 237 New method of feeding lubricant to the deformation zone in wire drawing V. F. Moreev and A. A. Korostelin  
239 Drawing wire rod from continuously cast metal I. A. Leonov and A. I. Belova

## POWER AND PLANT

- 240 Power efficiency of heat pumps in waste-heat utilization systems V. E. Tselebrovskii  
242 Hot cooling of open-hearth furnaces F. G. Rostovshchikov and V. I. Chernosukov

## FOUNDRY PRACTICE

- 243 Experience in using cupolas with water cooling P. L. Khokhlov et al.

Available From The British Iron and Steel Institute

# MACHINES AND TOOLING

VOL. XXXII 1961

(Translated content of *Shtank i Instrument*, Issue No. 10)  
October 1961

ISSUE No. 10

## CONTENTS

	Shtank i Instrument Page	Page
22nd Congress of the Soviet Communist Party* ... ... ... ... ...	1	
Profile Errors in Rolled Gears and Methods of Eliminating Them. <i>G. V. Ostretsov, L. K. Manuilov, A. M. Bron and S. S. Chernikov</i>	2	3
Effect of Cyclic Errors in a Gear Grinding Machine on Gear Tooth Accuracy <i>A. V. Machitidze</i>	6	7
Compensating Possibilities of Gear and Other Types of Coupling <i>N. Ya Niberg</i>	10	10
A New Horizontal Gear Cutting Machine ... ... ... <i>V. M. Medvedev</i>	13	12
Mechanization and Automation of Machine Tool Fixtures ... <i>Yu. I. Kuznetsov</i>	15	14
Vertical Indexing Rack Conveyor ... ... ... <i>V. S. Dvornikov</i>	21	19
Plastics for Housing Components of Vertical Boring Mills <i>G. K. Kovalenko, E. I. Likholet and A. I. Khripunov</i>	23	21
Application of Polymer Materials in Model IK62 Lathes ... <i>L. T. Shtern</i>	26	23
Diamond Turning of Non-Ferrous Alloys and Fibre Glass <i>A. V. Rudnev and A. P. Dobychina</i>	31	27
Hot Flashless Die Forging of Gear Shaper Cutter Blanks <i>B. S. Tselin and A. M. Maslov</i>	34	30
Form Milling of Hardened Steel ... ... ... <i>G. G. Ovumyan</i>	36	33
Correction of Profile Broaches ... ... ... <i>P. G. Balyura</i>	37	33
Effect of Tool Tilting on Surface Finish When Fine Turning ... <i>V. N. Malikov</i>	40	35
Attachment for Tapping Small Nuts ... <i>M. A. Rikhlenko and B. L. Smolenskii</i>	41	36
Drilling Deep Holes in Drill Blanks ... <i>A. M. Girel' and Ya. B. Mashinskii</i>	43	38
Grinding Gear Shaping Cutters on a Spline Grinding Machine <i>A. M. Nadvikov and Yu. I. Lepeshkin</i>	45	39
Taper Turning on Model 1722 Copying Lathe ... <i>V. P. Safanyuk</i>	46	40
<b>INFORMATION</b>		
Pneumo-Hydraulic Quick-Acting Vice With Self-Adjusting Jaw	... ... ...	46
Conference of Machine Tool Engineers ...	... ... ...	47
Second International I.F.A.C. Congress† ...	... ... ...	42
<b>BIBLIOGRAPHY</b>		
Books ... ... ...	... ... ...	48
Journals ... ... ...	... ... ...	49

\*Not translated, as of no technical interest.

†Not translated, being a notice of a meeting obtainable from general international sources.

# MACHINES AND TOOLING

VOL. XXXII 1961 (Translated content of Stanki i Instrument, Issue No. 11)  
November 1961

ISSUE No. 11

## CONTENTS

	Page	<i>Stanki i Instrument Page</i>
The Material and Technical Foundation of Communism...	...	1
Machine Tool Industry Report to the XXII Party Congress	N. M. Voronichev and M. I. Korchin	2 3
Instruments in Machine Tools for Controlling Their Operation	B. S. Balakshin	5 6
Rigidity Calculations and Investigations of Anti-Friction Slideways	A. M. Levina and D. N. Reshetov	7 8
Anti-Friction Slideways in New Russian Internal Grinding Machines	V. A. Khokhlov	17 17
Improved Lubricating Methods for Slideways of Feed Mechanisms	G. A. Levit and B. G. Lur'e	19 18
Hydrodynamic Calculations of Multi-Pad Friction Bearings with Tilting Pads	Yu. N. Sokolov	26 25
Automatic Turning Practice	... N. M. Lych	29 27
Cutting Feeds and Speeds for Screwing With Four Tools in One Pass	S. E. Esikov and E. A. Kochmareva	32 31
Thick Anodizing of Components Made From Secondary Aluminium Alloys	I. I. Moroz, I. P. Kharlamov and L. S. Sokolova	35 32
Forces in Surface Grinding Cemented Carbides With Diamond Wheels	S. A. Popov and A. E. Gel'fand	38 35
<b>FACTORY PRACTICE</b>		
Machining Bevel Gears from Blanks with Forged-In Teeth	P. N. Khukhrin, M. G. Lebedev and A. M. Smurov	40 37
Clamping Mist Lubrication Nozzles by Means of Permanent Magnets	V. I. Kuznetsov and S. B. Tishakov	41 38
Rational Method of Cam Clamping	V. B. Kreitenburg	42 38
Cone Measuring Instrument	A. G. Sokolov	43 39
<b>INFORMATION</b>		
New Machines	...	44 40
<b>BIBLIOGRAPHY</b>		
Books	...	45 41
Journals	...	46 42
New Books on Production of Machine Tools. Published by Mashgiz	...	47 43

\*Not translated, as of no technical interest.

# MACHINES AND TOOLING

VOL. XXXII 1961 (Translated content of *Stanki i Instrument*, Issue No. 12)  
December 1961

ISSUE No. 12

## CONTENTS

	<i>Stanki i Instrument Page</i>
Skiving Tool Profiles for Simultaneous Form Turning and Facing ...	B. A. Perepelitsa 2 1
Housing Components of Machine Tools Fabricated by Welding ...	V. I. Kopitsyn 4 3
Effect of Heat Generation in a Cylindrical Grinding Machine ...	O. M. Gel'fel'd 10 9
Machine Tools for Machining Radiators and Boiler Sections ...	A. S. Zadonin 14 12
Efficient Milling of Titanium Steel Gears ...	N. S. Pyzhov 18 15
Turning Accuracy When Using Hydraulic Copy-Slides ...	V. F. Gushchin 19 17
Grinding Involute Cams and Spirals ...	S. I. Shipetin 22 19
Increasing the Productivity of Cutting Tools by Dividing Their Cutting Edges <i>A. Rzhezach (Czechoslovak People's Republic)</i>	23 20
University for the Advancement of Engineering Training ...	* 24
Straight Tools for Turning Steel 1Kh18N9T on Automatics <i>Sh. A. Krasil'Shchikov and I. I. Kalinina</i>	28 25
Heat Phenomena in Machining of Heat Resisting Alloys <i>A. M. Danilyan and P. I. Bobrik</i>	29 25
Deep Drilling in Stainless Steel ...	S. A. Rubinshtein and A. V. Serov 31 27
Power Relationships in High Speed Drilling of S.G. Cast Iron ...	V. A. Ostaf'ev 32 29
Non-Relieved Hobs With Inserted High Speed Steel Teeth ...	L. E. Pavlov 34 30
Straight Line Profiling of Spline Hobs ...	A. A. Semenov 36 32
Phosphating Steel and Cast Iron Components as Protection Against Corrosion <i>I. P. Kharlamov and I. I. Moroz</i>	37 33
<b>FACTORY PRACTICE</b>	
Turret Head for Mounting in a Lathe Tail Stock	B. L. Smolenko and M. A. Rokhlenko 38 34
Large Module Shaving Cutter	Ya. I. Adam and G. G. Ovumyan 39 34
Pneumatic Tamping Device	A. M. Mikulinskii, K. V. Bakin and E. F. Lyamin 40 35
Welding Defects in Machined Surfaces of Large Castings ...	P. S. Elistratov 41 36
Universal Thread Grinding Machine Model 5820	41 44
<b>BIBLIOGRAPHY</b>	
Books ...	42 36
Journals ...	43 37
Books on Rate Fixing, Organization and Payment for Work	43 38
New Books by Mashgiz	44 39

\* Not Translated, being details of Russian tuition course and of no direct technical interest.

Available From Production Engineering Research Association

# Glass and Ceramics

A translation of *Steklo i Keramika*, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of *Steklo i Keramika* is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVI, Nos. 1-4

(Russian original dated January-April, 1959)

November, 1960

## CONTENTS

	RUSS. PAGE	PAGE
<b>VOLUME XVI, NUMBER 1</b>		
Toward the Twenty-First Congress of the CPSU.....	3	1
Glass Flow in the Feeding Channel where the Machines are in Tandem. <u>N. K. Dertev</u> and <u>V. A. Gorokhovskii</u> .....	5	3
Protective Coatings for Glass Pots. <u>N. A. Shmeleva</u> and <u>T. S. Kotova</u> .....	12	8
The Influence of Particle Size on the Sintering of Corundum. <u>N. M. Plavushkin</u> .....	15	11
A Small High-Temperature Furnace. <u>D. B. Ginzburg</u> .....	21	15
The Wear Resistance of Non-Metallic Grinding Media During the Vibration Grinding of Raw Materials for Glass and Ceramics. <u>N. A. Matveev</u> and <u>A. I. Rabukhin</u> .....	23	17
Materials for Anodes (Molds) in the Electrophoretic Method of Casting Ceramic Ware. <u>N. K.</u> <u>Antonovich</u> and <u>E. S. Butyleva</u> .....	26	20
The Causes of Deformation and Cracking of Porcelain Ware. <u>A. M. Akh'yan</u> .....	31	24
The Use of Humates for the Dilution of Slips. <u>T. Kh. Fedorova</u> .....	34	27
<b>INDUSTRIAL EXPERIENCE</b>		
The Firing of Earthenware in Oil-Fired Tunnel Lehrs on Trolleys with Shelves and Screens. <u>V. I. Dobuzhinskii</u> , <u>R. M. Zaionts</u> and <u>N. N. Nizhegorodov</u> .....	38	29
Converting Kilns from Solid Fuel to Natural-Gas Firing. <u>V. F. Ignatov</u> .....	43	33
Introducing New Methods. <u>B. D. Blitsman</u> and <u>T. I. Kudrina</u> .....	46	36
An Improved Method of Drawing Colored Signal Glass. <u>M. A. Tsaritsyn</u> , <u>N. I. Zakharenko</u> and <u>K. V. Gulyaev</u> .....	51	40
A Glass Tank Furnace with a Reduced Working Area. <u>S. S. Sedov</u> and <u>E. D. Didenko</u> .....	55	44
The Manufacture of Facing Tiles, Sanitary-Engineering Products, and Wall Blocks in Italy. <u>A. A. Kopeikin</u> .....	57	45
<b>FROM THE FOREIGN JOURNALS</b>		
Indium-Oxide Conducting Coatings.....	62	48
<b>VOLUME XVI, NUMBER 2</b>		
The Glass Industry in Soviet White Russia. <u>Ya. A. Gol'bin</u> .....	63	1
The Gomel' Plant — A Leading Enterprise in the White-Russian Glass Industry. <u>D. V.</u> <u>Zaliznyak</u> .....	65	4
Intensification of the Glass-Polishing Process on Conveyor Systems. <u>Yu. A. Brodskii</u> .....	72	7
Panoramic Glazing of Motor Vehicles. <u>Z. I. Bronshtein</u> .....	76	11
The Influence of Fluorides on the Glass Formation and Viscosity of Nonalkaline High-alum- inous Glasses. <u>M. V. Okhotin</u> and <u>A. V. Ushanova</u> .....	81	15
On Efficient Equipment for the Manufacture of Storage Glassware. <u>A. E. Kotiyar</u> .....	82	16
An Instrument for Measuring and Recording the Viscosity of Silicate Melts. <u>R. A. Lipman</u> , <u>R. I. Mazo</u> , and <u>Z. A. Nosova</u> .....	84	18
Performance Data on the Magnetic Filter-Separator. <u>E. P. Fefilaktova</u> .....	88	21
Study of the Performance of Tunnel Lehrs for Firing Sanitary Ware. <u>P. I. Berenshtain</u> .....	92	24
Suran Pyrophyllite As a Ceramic Raw Material. <u>A. V. Shlayerman</u> .....	99	31

Available From Consultants Bureau

## CONTENTS (continued)

	<b>PAGE</b>	<b>RUSS. PAGE</b>
<p><b>Steklo i Keramika</b>  <b>Vol XVI, Nos 1-4, 1959</b></p> <p><b>INDUSTRIAL EXPERIENCE</b></p> <p>The Use of a Semilogarithmic Grid in China Translucency Investigations <u>V. P. Shvaiko</u> . . . . .  <b>Tank Furnace for Melting Low-Alkali Glass.</b> <u>A. N. Afanasev, G. V. Pototskaya, S. L. Andreev,</u>  <u>and V. P. Surovtsev</u> . . . . .  <b>A Three-Phase Induction Glassware-Annealing Lehr.</b> <u>A. Yu. Kaplan, A. G. Abramov, and</u>  <u>V. N. Shimakov</u> . . . . .  <b>Overhead Tracks For Handling Materials.</b> <u>S. N. Evsyutin and A. I. Baryshev</u> . . . . .</p> <p><b>FOREIGN EXPERIENCE</b></p> <p>Firing Glazed Tiles in Czechoslovakian Plants. <u>R. L. Rokhvarger, N. K. Antonevich, and</u>  <u>T. Kh. Fedorova</u> . . . . .  Progress in Triplex-Glass Manufacturing. <u>B. Jacobi</u> . . . . .</p> <p><b>CHRONICLE</b></p> <p>Conference on the Grinding and Polishing of Glass. . . . .  <b>REVIEWS AND BIBLIOGRAPHIES</b></p> <p>Ceramic Floor Tiles. <u>P. P. Budnikov</u> . . . . .</p> <p><b>VOLUME XVI, NUMBER 3</b></p> <p>Program for Major Works. . . . .  Curved Automobile-Glass Manufacture by the Softening Method. <u>A. P. Aleksandrov</u> . . . . .  Heat Exchange Between Batch and Flame in the Glass Furnace. <u>K. K. Vilnis and M. G.</u>  <u>Stepanenko</u> . . . . .  A Study of the Possibility of Manufacturing "Visurite" Glass. <u>I. I. Kitaigorodskii, L. G.</u>  <u>Baiburt, I. N. Zertsalova, V. G. Karpechenko and E. A. Fainberg</u> . . . . .  Heat-Resistant Yellow-Orange Light Filters. <u>G. S. Bogdanova and E. M. Orlova</u> . . . . .  The Use of Water Glass in the Precision Casting of Products from Fused Silicates. <u>M. A.</u>  <u>Matveev, A. I. Rabukhin, V. V. Chernyshev and V. P. Bulgarov</u> . . . . .  Casting Conveyors in Czechoslovakian and USSR Sanitary-Ware Factories. <u>E. L. Rokhvarger,</u>  <u>N. K. Antonevich and T. Kh. Fedorova</u> . . . . .  On Expanding the Raw-Mineral Sources of Felspar. <u>V. A. Meitina, E. I. Popova and V. I.</u>  <u>Magidovich</u> . . . . .  Assessing the Plasticity of Clay Materials. <u>I. A. Uskov</u> . . . . .  The Influence of Fluoride on Certain Priming Enamel Properties. <u>G. I. Belyaev</u> . . . . .  High Performance Figures for a Glass Furnace. <u>V. T. Dubinin and V. M. Obukhov</u> . . . . .  The Practical Use of Tar for the Combustion of Producer Gas in Glass Furnaces. <u>S. I. Zherebin</u>  <u>and N. P. Kabanov</u> . . . . .  Increased Efficiency of Press and Blow Machines. <u>A. E. Kotylar</u> . . . . .  Single-Stage Firing of Chinaware. <u>L. G. Reznikov</u> . . . . .  The Influence of Sand Particle Size on the Refinement of Sodium-Calcium-Silicate Glass  in a Laboratory Furnace. <u>M. Cable</u> . . . . .  Chemical Resistant Glass with Small Additions of Titanium and Zirconium Oxides. . . . .  <b>CHRONICLE</b></p> <p>The First International Congress on Automatic Controls is to Take Place in Moscow. . . . .  <b>REVIEWS AND BIBLIOGRAPHIES</b></p> <p>New Techniques in China and Earthenware Manufacture. <u>P. P. Budnikov</u> . . . . .  The Late A. A. Litvakovskii. . . . .</p> <p><b>VOLUME XVI, NUMBER 4</b></p> <p>The Main Trends of Scientific Research and Experimental Design in the Glass Industry for  1959-1965. <u>F. G. Solinov</u> . . . . .  The Effect of the Boundary Arrangement on the Thermal Balance in the Tank-Furnace Cool-  ing Zone. <u>M. G. Stepanenko and V. S. Pavlov</u> . . . . .  The Study and Application of Synthetic Organic Silicates. <u>A. P. Kreshkov, T. N. Keshishyan,</u>  <u>L. V. Myshlyaeva, and L. M. Khananashvili</u> . . . . .</p>	<b>PAGE</b>	<b>RUSS. PAGE</b>
	104	34
	108	37
	111	39
	113	41
	115	42
	119	45
	122	47
	124	48
	125	1
	127	4
	133	8
	136	12
	138	13
	141	16
	144	18
	149	23
	153	26
	157	30
	160	32
	166	38
	171	42
	173	44
	175	45
	176	46
	178	46
	179	47
	180	48
	181	1
	186	6
	192	11

Available From Consultants Bureau

## CONTENTS (continued)

*Steklo i Keramika*

Vol XVI, Nos 1-4, 1959

	RUSS. PAGE
The Influence of the Granulometric Constitution of Dolomite on the Glass Formation of Magnesium Alumina Batch. I. D. Tykachinskii and M. B. Romanovskii . . . . .	197      14
A New Method of Producing Glass Tiles. M. A. Tsaritsyn and A. I. Proshkina . . . . .	202      19
Complexometric Determination of Calcium and Magnesium Oxides in Vertically Drawn Glass. O. V. Krasnovskii, E. P. Bil'tyunkova, and A. M. Esechko . . . . .	206      22
On the Assessment of Raw Material Nonhomogeneity. I. B. Shlaim and E. I. Smirnov . . . . .	210      25
An Instrument for Measuring the Resistance of Semiconducting Films on Glass and Ceramics. G. K. Demishev . . . . .	215      29
The Manufacture of China and Pottery by Press Molding. V. A. Vizir, M. G. Sivchikova, V. Z. Safonova and Z. P. Sen'. . . . .	218      31
An Efficient Method of Determining the Quartz Content in Feldspar Ceramic Raw Material. S. M. Kupfer . . . . .	222      35
A New Photo-Ceramic Technique. T. P. Tsyndrya . . . . .	224      36
<b>INDUSTRIAL EXPERIENCE</b>	
Glass Enamelled Tiling. V. I. Savchenko and A. E. Salo . . . . .	228      39
The Use of Open Hearth Silica for Tank Furnace Crown Brickwork. A. I. Kukarkin . . . . .	230      41
Low-Melting Glaze for Clay Drainpipes. D. M. Panchenko . . . . .	233      43
Some Reserves for Raising Labor Efficiency in Glass Factories. M. I. Berezhkovskaya . . . . .	235      44
<b>LETTERS TO THE EDITOR</b> . . . . .	
A Study of the Potentialities of Lithium Glass-Making. H. Rauch et al. . . . .	238      46
Conference on Refractory Materials in the Glass Industry. . . . .	240      47
	241      48
<b>CHRONICLE</b>	
A session of the Board of the State Scientific Research Committee of the USSR Soviet of Ministers on the Subject of New Glass-Based Technical Materials . . . . .	242      48
<b>REVIEWS AND BIBLIOGRAPHIES</b>	
Colored Glasses. M. A. Bezborodov . . . . .	245      50

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVI, Nos. 5-8

(Russian original dated May-August, 1959)

November, 1960

## CONTENTS

	RUSS. PAGE	PAGE
<b>VOLUME 16, NUMBER 5</b>		
Glass Science at the Eighth Mendeleev Congress . . . . .	250	1
Accelerating the Pulverization of Alumina in the Glass and Ceramics Industry <i>I. I. Kitaigorodskii and Ts. N. Gurovich</i> . . . . .	254	5
The Influence of Fluoride on the Processes Taking Place When Heating a Nonalkaline Batch. <i>L. D. Tykachinskii and S. P. Obidina</i> . . . . .	258	9
A Highly Efficient Method of Sticking Curved Automobile Glasses Together <i>Z. I. Bronshtein and V. I. Kostin</i> . . . . .	260	11
Granulation of the Glass Batch. <i>M. F. Gur'yanova</i> . . . . .	264	14
Improving the Transparency of S-23 Glass in the Closer Infrared Range of the Spectrum <i>L. A. Novitskii</i> . . . . .	266	16
The Trend of Scientific and Design Work in the Expansion of the Manufacture of Domestic China and Pottery. <i>I. Ya. Yurchak and G. A. Kovel'man</i> . . . . .	269	18
The Use of Bentonite for the Manufacture of Clay Products. <i>G. V. Kukolev and N. V. Pitak</i> . . . . .	273	22
The Use of the Torsional Method for Determining the Viscosity of Low Melting Clays <i>V. F. Pavlov</i> . . . . .	278	26
An Instrument for Determining the Elastic Constants in Glass and Ceramics. <i>G. K. Demishev</i> . . . . .	283	31
<b>INDUSTRIAL EXPERIENCE</b>		
Rapid Glass Ribbon Drawing. <i>L. V. Cherevatenko</i> . . . . .	288	34
A New Glass-Level Gauge. <i>A. V. Barkhatov</i> . . . . .	290	36
<b>LETTERS TO THE EDITOR</b> . . . . .	292	38
<b>FROM THE FOREIGN JOURNALS</b>		
Prospects for the Development of Fine-Ceramic Manufacturing Techniques. <i>F. Norton</i> . . . . .	294	39
The Effect of the Sulfate Content in Clays on Discoloration in Ceramic Wall Facings <i>W. Brownell</i> . . . . .	296	40
The Choice of Refractory Materials for Lehr Cars. <i>P. Robinson</i> . . . . .	297	40
A Highly Mechanized Ceramic Drain Pipe Factory . . . . .	298	41
A Glass Melting Tank Furnace with Barriers Immersed in the Batch Fusion Zone . . . . .	299	42
The Air-Cooling of the Pickups Which Deliver Molten Glass to the Machine Feeders. <i>P. Spatz</i> . . . . .	299	42
Methods of Improving the Efficiency of the Production of Plaster Molds. <i>K. Litzow</i> . . . . .	300	42
<b>CHRONICLE</b>		
The Sixth International Ceramics Congress. <i>N. A. Toropov</i> . . . . .	301	43
<b>REVIEWS AND BIBLIOGRAPHIES</b>		
Fusion Cast Refractory Materials. <i>P. P. Budnikov</i> . . . . .	303	44
<b>VOLUME 16, NUMBER 6</b>		
The Ceramic Industry is in Need of Modern Muffle and Electric Lehrs. <i>A. A. Kopelkin</i> . . . . .	305	1
The Use of Vibration in the Casting of Ceramic Ware. <i>R. Z. El'kinson and S. G. Tumanov</i> . . . . .	312	7
Improving the Performance of Conveyor Wall Tile Drying Ovens. <i>B. N. Gak</i> . . . . .	317	13
The Grinding of Ceramic Materials With Free Abrasives. <i>T. P. Kapustina</i> . . . . .	323	18
On the Mechanism of Glaze Opacification with Zirconium and Lead Oxide. <i>Z. A. Nosova</i> . . . . .	327	22

Available From Consultants Bureau

## CONTENTS (continued)

	RUSS. PAGE	PAGE
<u>Steklo i Keramika</u> Vol XVI, Nos 5-8, 1959		
The Study of the Retardation Ratios of Tank Furnace Barriers, on Models. <u>D. S. Velev</u> . . . . .	332	27
An Instrument for Glass Sampling in Depth. <u>K. K. Vilnis, V. V. Pollyak and V. D. Soskova</u> . . . . .	339	32
Calculations for Taking Average Samples of Loose Materials. <u>E. I. Smirnov</u> . . . . .	342	35
<b>INDUSTRIAL EXPERIENCE</b>		
Feeder Delivery to VShM Semiautomatic Machines in the Manufacture of 10 Liter Carboys. <u>E. D. Didenko and M. B. Dobrovinskii</u> . . . . .	347	38
Flat Noncooled Arches for Tank Furnace Feeder Housings. <u>A. N. Orlov</u> . . . . .	351	42
An Improved Mold Design for Tamping Plungers and Bushings. <u>V. V. Vladychenskaya and K. E. Zubkov</u> . . . . .	352	43
The Use of Electrolyte-Free Kaolins. <u>A. P. Yashchuk and M. E. Lants</u> . . . . .	353	45
<b>LETTERS TO THE EDITOR</b> . . . . .	356	47
<b>FROM THE FOREIGN JOURNALS</b>		
A Five-Year Tank Furnace Campaign in a Glass Factory. . . . .	358	48
Intensification of the Glass Melting in Tank Furnaces by Means of Auxiliary Electric Heating. . . . .	358	48
A Method of Reducing Striation in Rolled Sheet Glass. . . . .	359	48
An Improved Method of Collarless Sheet Glass Drawing. . . . .	359	48
Semiconducting Properties of Certain Vanadate Glasses. <u>P. Baynton</u> . . . . .	359	48
<b>VOLUME 16, NUMBER 7</b>		
New Techniques for the Ceramic Industry. <u>K. A. Nokhratyan</u> . . . . .	360	1
The Influence of BeO and Technical Alumina Additions on the Basic Properties of Electrical Porcelain. <u>P. P. Budnikov and A. A. Zvyagil'skii</u> . . . . .	362	3
The Influence of Peptizators on the Output of the Extruder in the Working of Pottery Masses and Kaolin-Bentonite Suspensions. <u>G. V. Kukolev and N. V. Pitak</u> . . . . .	367	7
The Grinding of Ceramic Materials with Bonded Abrasives. <u>T. P. Kapustina and A. A. Bykova</u> . . . . .	371	12
Vacuum Casting of Earthen Sanitary Ware. <u>B. N. Ch'ishevskii</u> . . . . .	375	15
The Mechanized Assembly and Sticking of Ceramic Mosaic Tiles. <u>A. Z. Leit'man and L. F. Golubov</u> . . . . .	377	17
A New Type of Drain Pipe. <u>M. P. Feigin</u> . . . . .	379	19
Boron-Free and Lead-Free Pottery Glazes. <u>M. G. Sivchikova and F. L. Dain</u> . . . . .	382	22
Raising Glass Furnace Efficiency by Improved Sealing of the Regenerative and Recuperative Systems. <u>B. D. Ginzburg, M. A. Matveev and S. L. Zherebin</u> . . . . .	387	26
A Study of the Inherent Effect of Glass Polishing Intensifiers with the Help of Labeled Atoms. <u>V. A. Dubrovskii and T. S. Dubrovskaya</u> . . . . .	391	30
A Radioactive Thickness Gauge for the Continuous Noncontact Measurement of Rolled Glass Ribbon. <u>O. P. Nikitin and D. A. Leshchinskii</u> . . . . .	397	35
New Reflectometer Models. <u>G. M. Gorodinskii, A. M. Kudryashov and Yu. K. Mikhailovskii</u> . . . . .	399	37
<b>INDUSTRIAL EXPERIENCE</b>		
Accelerated Drying of Ceramic Sanitary Ware. <u>B. N. Gak</u> . . . . .	402	40
Mechanization and the Distribution of Labor in the Decorating Shop. <u>K. S. Vladimirtsev</u> . . . . .	406	43
<b>CHRONICLE</b>		
On V. V. Vargin's Sixtieth Birthday. . . . .	410	47
<b>FROM THE FOREIGN JOURNALS</b>		
Equipment for the Horizontal Drawing of Glass. . . . .	412	48

Available From Consultants Bureau

## CONTENTS (continued)

	<u>Steklo i Keramika</u>	<u>RUSS.</u>
	Vol XVI, Nos 5-8, 1959	PAGE
Glass for Atomic Reactors.....	412	48
The Influence of Fluorides on the Spectral Transmission of Glass in the Infrared Range...	413	48
The Use of Synthetic Resins for Pattern Making in the Fine-Ceramics Industry.....	413	48
<b>VOLUME 16, NUMBER 8</b>		
Toward the Realization of the Resolutions of the Plenum of the CPSU Central Committee,	414	1
Glass Concrete Heating Panels. L. E. Shapiro and A. Z. Ivyanskii.....	417	4
The Relation Between the Microhardness and the Microheterogeneity of Glass. T. N. Keshishyan and M. B. Epel'baum.....	422	9
A Study of the Turbulence in Tank Glass Furnaces Using Models. D. S. Velev.....	426	13
On Designing Electric Glass-Melting Furnaces. N. A. Sheludyakov.....	430	16
Glass Wall Tiles with a Flame-Polished Surface. A. A. Myasnikov.....	433	18
Steklofon (A Safety Glass). A. G. Minakov, Z. F. Korchagina and N. L. Pogarskii.....	435	21
Sanitary Ware Factory Firing Departments. L. A. Lifshits.....	437	22
Substituting Zirconium for Stannous Oxide in Opaque Glazes. Z. A. Nosova.....	442	27
The Optimal Moisture Content for Molding Structural Products from Dispersed Plastic Compositions. V. S. Fadeeva.....	448	33
The Petrographic Features of Chinese Porcelain Stone. L. N. Nikulina and T. I. Taraeva..	455	40
<b>INDUSTRIAL EXPERIENCE</b>		
Modification of the Glass Furnace Bridge Design. L. Ya. Zel'dovich.....	461	44
Removing Sagging Bricks from the Tunnel Lehr Crown. V. V. Smirnov, M. Ya. Chesnovetskii and G. K. Zaitsev.....	463	46
<b>FROM THE FOREIGN JOURNALS</b>		
On the Mechanical Strength of Twin Glazing Sets with a Sealed Air Interlayer. F. Katheder.....	465	47
The Optical and Physical Properties of Certain Calcium-Aluminate Glasses. H. Hafner.....	465	48
A New Method of Preventing Caking in the Ribbon Extruder. E. Bruckner.....	466	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVI, Nos. 9-12 (Russian original dated September - December 1959) December, 1960

## CONTENTS

	PAGE	RUSS. PAGE
Volume XVI, Number 9		
Alkali-Bearing Minerals Should Be more Extensively Used in the Manufacture of Glass	469	1
Anomalous Birefringence and Glass Structure. O. K. Botvinkin and N. I. Ananich . . . . .	473	6
The Influence of Barrier Design on Glass Flow. D. S. Velev . . . . .	479	11
An Experiment in Organizing the Production of Electrical Insulators at the Yarvakandi Factory. L. I. Buneeva, Z. S. Gorshkova, G. L. Matveeva, N. E. Karisma, and R. É. Etverk . . . . .	484	16
The Thermal Balance of the Feed Channel. V. A. Gorokhovskii . . . . .	488	20
A Study of Bubble Formation when Melting Glass in a Vacuum. V. T. Slavyanskii, E. N. Kretnikova, and M. V. Proskuryakov . . . . .	496	25
The Quality of Flux Processing Must Be Improved. L. A. Lifshits . . . . .	501	30
The Plasticity of Ceramic and Refractory Masses. A. V. Trushin . . . . .	502	31
INDUSTRIAL EXPERIENCE		
Cooling Plant. E. L. Kotlyarov . . . . .	507	34
ECONOMIC CONSIDERATIONS		
For Better Plant Capacity Utilization in Window Glass Factories. M. I. Berezhkovskaya	510	37
FOREIGN EXPERIENCE		
Remarkable Czechoslovakian Glass . . . . .	514	40
The Manufacture of Bottles from High Alumina Glass in Czechoslovakia. F. Kotshmid	517	41
Foreign Standards for Window Glass. M. R. Savitskii and M. I. Berezhkovskaya . . . . .	520	44
FROM THE FOREIGN JOURNALS		
Glass Manufacture in the USA in 1958 . . . . .	523	45
The Hot Processing of Sheet Glass in a Tank of Molten Metal. . . . .	525	47
An Automatic Press for Making Wall Tiles. . . . .	527	48
Volume XVI, Number 10		
Toward the Most Speedy Realization by the Ceramic Industry of the Decrees of the Plenum of the Central Committee of the CPSU . . . . .	529	1
Certain Properties of Nonalkaline Foam Glass. I. I. Kitaigorodskii and T. I. Shirkevich . . . . .	533	5
The Effect of Certain Minor Additions upon the Melt. M. A. Bezborodov . . . . .	535	7
Investigation of the Glass Refining Process with the Aid of Motion Pictures. F. G. Solinov and N. A. Rankova . . . . .	537	9
A Study of the Crystallization of Lithium Glasses in the System Li <sub>2</sub> O-SiO <sub>2</sub> . M. A. Matveev and V. V. Velya . . . . .	543	14

Available From Consultants Bureau

## CONTENTS (continued)

	RUSS. PAGE	PAGE
<u><i>Steklo i Keramika</i></u> Vol XVI, Nos 9-12, 1959		
The Effect of the Thermal Preparation of the Batch on the Glass Melt. <u>D. V. Zaliznyak, M. Ya. Firer, V. V. Konovalov, V. I. Chechetkin, and V. G. Dunaev</u> . . . . .	550	21
The Intensification of the Grinding Process with the Vibration of the Grinder. <u>G. K. Demishev</u> . . . . .	557	27
Accelerating the Drying of Sanitary Ware. <u>P. V. Sokolov and B. N. Gak</u> . . . . .	561	31
The Influence of Technical Alumina Dispersion on the Sintering of Corundum Body. <u>G. A. Vydrin</u> . . . . .	56^	35
<b>INDUSTRIAL EXPERIENCE</b>		
Modernization of Tank Furnaces. <u>M. I. Kozmin</u> . . . . .	571	39
The Mechanization of Heavy Operations in the Course of Glass Furnace Repairs. <u>A. E. Issers and D. I. Klegg</u> . . . . .	574	42
A Paste for Removing Gold Smudges from China Ware. <u>N. A. Kuzmin</u> . . . . .	578	46
<b>FROM THE FOREIGN JOURNALS</b>		
Conversion of a Tile Factory to Single-Stage Firing. . . . .	580	47
Glass and Ceramics at the Polish Industrial Exhibition in Moscow . . . . .	581	48
<b>Volume XVI, Number 11</b>		
Every Effort Toward Fulfilling the Great Tasks in the Building of Communism . . . . .	587	1
"Penosil", a Heat Resisting Insulating Material. <u>I. I. Kitaigorodskii and N. V. Artamonova</u> . . . . .	590	4
The Influence of Finely Ground High-Melting Batch Constituents on the Melt Temperature and Quality of High Zirconium Glass. <u>M. A. Matveev and E. P. Dain</u> . . . . .	594	8
The Optimal Chemical Composition of Glass for Vertical Drawing Through a Collar. <u>A. L. Vainshtein, B. G. Pronin, and V. V. Polylyak</u> . . . . .	599	12
The Properties of the Siliceous Film. <u>A. Ya. Kuznetsov</u> . . . . .	604	17
Certain Characteristics of Glass-Fiber and the Structure of Glass. <u>A. F. Zak</u> . . . . .	608	20
The Polishing Capacity of Soviet-Produced Rouges. <u>A. I. Korelova and T. A. Makarova</u> . . . . .	612	24
New Instruments for Studying the Physical Properties of Glass. <u>V. I. Shelyubskii</u> . . . . .	615	27
Wollastonite as a Raw Material for the Ceramic Industry. <u>N. P. Bogoroditskii, N. L. Polyakova, A. M. Eidel'kind, V. G. Prokhvatilov and V. P. Petrova</u> . . . . .	611	32
The Use of Volcanic Ash in Electrical Porcelain Compositions. <u>N. K. Zhuravskii, U. T. Chernushkhin, and A. N. Kapel'ko</u> . . . . .	628	38
<b>ECONOMIC CONSIDERATIONS</b>		
On Methods of Analyzing Labor Productivity in the Glass Industry. <u>M. A. Plotkina and B. L. Pozin</u> . . . . .	631	41
<b>FOREIGN EXPERIENCE</b>		
Electric Conducting Coatings on Glass. <u>Ya. Frich</u> . . . . .	633	43
Ceramic Compositions in the USA. <u>I. Ya. Lifshits</u> . . . . .	635	44
<b>FROM THE FOREIGN JOURNALS</b>		
The Use of Multichannel Lehrs in the Ceramic Industry. <u>J. Massieye</u> . . . . .	639	46
Experiment in the Gasification of Liquid Fuels. <u>H. Guillon</u> . . . . .	640	47
Automatic Machines for Ceramic Tile Production. . . . .	641	47
<b>CHRONICLE</b>		
Conference on Raising the Efficiency of Glass-Melting Furnaces . . . . .	642	48
<b>Volume XVI, Number 12</b>		
Problems in the Automation of China and Pottery Manufacture. <u>I. Ya. Yurchak, F. S. Entelis, and N. N. Gorodov</u> . . . . .	643	1

Available From Consultants Bureau

## CONTENTS (continued)

<u><i>Steklo i Keramika</i></u> Vol XVI, Nos 9-12, 1959	RUSS. PAGE	PAGE
A Study of Surface Phenomena in Fired China Compositions. <u>I. K. Matveev</u> . . . . .	646	4
Decorating China Ware with Aluminum Film. <u>T. I. Kudrina</u> . . . . .	649	7
On the Physicochemical Processes of Enamelling Aluminum <u>K. P. Azarov</u> and <u>S. B. Grechanova</u> . . . . .	652	10
Determining the Fusability of Enamels by the Shadow Method. <u>G. A. Kovtunenko</u> and <u>V. M. Orlova</u> . . . . .	657	14
The Choice of an Efficient Design for a Foam Glass Manufacturing Plant. <u>I. I. Kitaigorodskii, L. M. Butt, V. L. Gaisinskii, and K. A. Myasnikov</u> . . . . .	658	15
Ways of Mechanizing Inter-Shop Handling in Container Glass Factories. <u>A. E. Kotlyar</u> .	665	21
Natural-Gas Fired Glass Furnace Regenerator Dimensions. <u>V. A. Kuzyak</u> . . . . .	668	24
Decolorizing Glass. <u>M. M. Skornyakov</u> . . . . .	674	29
Anorthosite—a Promising Raw Material for Low Alkaline Glass. <u>E. I. Popova</u> and <u>V. I. Magidovich</u> . . . . .	678	33.
<b>INDUSTRIAL EXPERIENCE</b>		
The Use of Open Hearth Silica for Doghouse Arches and Semicircular Regenerator Arch Brickwork. <u>A. I. Kukarkin</u> . . . . .	681	35
<b>ECONOMIC CONSIDERATIONS</b>		
Discussion On Assessing the Performance of Sheet Glass Factories. <u>B. G. Pronin</u> . . . . .	683	37
<b>FOREIGN EXPERIENCE</b>		
Enamelling Steel and Cast-Iron Products in Chinese Factories. <u>E. A. Antonova</u> . . . . .	686	39
<b>FROM THE FOREIGN JOURNALS</b>		
Lightweight Blocks from Porous Clay Filler with a Clay Binding . . . . .	690	41
A Phosphate Semi-Conducting Glass . . . . .	690	42
<b>CHRONICLES</b>		
The Fifth International Glass Congress. <u>V. V. Vargin and M. S. Aslanova</u> . . . . .	691	42
From Readers Conferences . . . . .	692	43
<b>REVIEWS AND BIBLIOGRAPHIES</b>		
"Ceramic Drain Pipes" . R. M. Zaionts. . . . .	694	44
<b>INDEXES</b>		
Author Index, Volume XVI . . . . .	697	
Tables of Contents, Volume XVI . . . . .	699	

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVII, No. 1

(Russian original dated January, 1960)

December, 1960

## CONTENTS

	RUSS. PAGE	PAGE
New Increases in the Output of the Glass and Ceramic Industry .....	1	1
Problems Associated with the Mechanization and Automation of Glass Manufacture, <u>V. G. Gutop</u> .....	3	4
The Use of Silicoorganic Compounds for Improving the Properties of Glass. <u>S. I. Sil'vestrovich</u> and <u>I. A. Boguslavskii</u> .....	7	7
The Effect of Throat Width on the Thermal Uniformity of the Glass in the Working Channel. <u>V. S. Pavlov</u> .....	12	12
Depth Pyrometry with Molten Glass in the Working Channel. <u>V. A. Gorokhovskii</u> .....	16	16
Determining the Optimal Grain Size of Siliceous Materials for Glass Formation. <u>F. Ya. Kharitonov</u> .....	19	18
Heat Treatment in the Casting of Sanitary Earthenware on a Conveyer. <u>P. V. Sokolov</u> .....	22	21
A Method of Evaluating the Effectiveness of Clay-Working Equipment. <u>L. L. Koshyak</u> .....	29	27
An Optical Method for Determining the Quality of Glaze Surfaces. <u>A. M. Akh"yan</u> .....	33	30
Enamels for Aluminum Based on the Lead-Phosphate-Silicate System. <u>M. A. Bezborodov</u> , <u>E. F. Mazo</u> , and <u>V. S. Kaminskaya</u> .....	37	35
INDUSTRIAL EXPERIENCE		
Vacuum Transportation of the Batch. <u>T. I. Stukan</u> and <u>G. G. Ustyugov</u> .....	42	39
Improvement in a Burner Design for a Glass Furnace. <u>F. I. Torlin</u> .....	44	41
The Use of Sodium Silicofluoride for Intensifying Glass Melting. <u>P. I. Litvinov</u> .....	49	45
LETTER TO THE EDITOR		
Selecting the Best Type of Tunnel Kilns for the Domestic Ceramic Industry .....	52	47
FROM THE FOREIGN JOURNALS		
New Type of Lehr for Annealing Glass. .....	53	48
Glass-Plastic Pipe. <u>H. Bogg</u> .....	53	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVII, No. 2

(Russian original dated February, 1960)

December, 1960

## CONTENTS

	RUSS. PAGE	PAGE
Experience with the Use of Direct-Heated Tank Furnaces. <u>L. G. Gol'denberg, A. P. Levina, and S. I. Matyusha</u> . . . . .	56	1
Melting Borosilicate Glass in a Vertical Electric Furnace. <u>M. G. Manvelyan, A. F. Melik-Akhnazaryan, K. A. Kostanyan, S. O. Nalchadzhyan, E. A. Erznkyan, and K. M. Tatevosyan</u> . . . . .	61	5
Developments in the Synthesis of Corundum Microlite. <u>I. I. Kitaigorodskii and Ts. N. Gurevich</u> . . . . .	66	10
The Heat Economics of Sectional Regenerators. <u>K. K. Vilnis</u> . . . . .	68	12
Experience with the Mechanized Production of Borosilicate Glass. <u>A. A. Naida</u> . . . . .	72	16
Toward the Study of the Glass Region in the System $P_2O_5 - Al_2O_3 - ZnO$ . <u>Z. M. Syritskaya and V. V. Yakubik</u> . . . . .	74	18
Cerium Dioxide as a Fining Agent and Decolorizer for Glass. <u>V. V. Vargin and G. A. Osadchaya</u> . . . . .	78	22
Green Heat-Resistant Light Filters. <u>G. S. Bogdanova and E. M. Orlova</u> . . . . .	83	26
Some Technical Problems in the Production of Glass Fibers and Glass Plastics. <u>M. G. Chernyak</u> . . . . .	85	28
The Physicochemical Nature of Clay Bloating - The Formation of Keramzite. <u>L. M. Blyumen</u> . . . . .	89	32
Improving the Quality of Plaster Molds. <u>R. Z. El'kinson</u> . . . . .	94	37
INDUSTRIAL EXPERIENCE		
Introducing Nepheline Concentrate into Production. <u>A. I. Soldatov</u> . . . . .	97	39
The Use of Common Salt Accelerated Glass Melting. <u>G. V. Gavrilova</u> . . . . .	98	40
A Tubular Drill for Glass and Ceramics. <u>A. T. Karpov</u> . . . . .	99	40
FOREIGN EXPERIENCE		
Drying Ceramic Goods with Complicated Shapes. <u>M. Korger</u> . . . . .	100	42
FROM THE FOREIGN JOURNALS		
A Method of Fining Glass in a Tank Furnace. . . . .	103	44
Preforming of Glass Plates for Panoramic Glazing of Automobiles . . . . .	103	44
Opaque Glazes from Titanium Dioxide. <u>K. Styhr and M. Beals</u> . . . . .	104	44
CHRONICLES		
Workers in Window-Glass Plants Exchange Experiences . . . . .	105	45
REVIEWS AND BIBLIOGRAPHIES		
"Porous Permeable Ceramics" . . . . .	108	47
Koryun Amazaspovich Nokhratyan . . . . .	109	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVII, No. 3

(Russian original dated March, 1960)

December, 1960

## CONTENTS

RUSS.  
PAGE PAGE

Heat Transmission Through the Walls of Glass Tanks. <u>N.A. Zakharikov</u> and <u>A.I. Rozanskii</u> . . . . .	112	1
Specific Yield of Glass as a Production Index for Tank Furnaces. <u>K.K. Vilnis</u> , <u>V.V. Polyak</u> , and <u>V.S. Pavlov</u> . . . . .	120	9
A Glass-Tank Furnace of the Zonal Type. <u>A.E. Kotlyar</u> . . . . .	125	14
Replacing the Regenerator Checkers during Tank-Furnace Operations. <u>K.R. Vlasov</u> . . . . .	128	16
A Study of the Hydration of Simple Lithium Glasses and their Solubility in the Hydrated State. <u>M.A. Matveev</u> and <u>V.V. Velya</u> . . . . .	130	18
The Effect of Viscosity Changes in the 800-1200° Range on the Vitrification and Bloating of Low-Refractory Clay. <u>F. Pavlov</u> . . . . .	133	2
High-Frequency Ceramics Based on Wollastonite. <u>V.G. Avetikov</u> , <u>E.I. Zin'ko</u> , and <u>N.A. Zasedateleva</u> . . . . .	137	25
A Method of Measuring the Elastic Expansion of Ceramic Raw Materials and the Pressure of the Air Compressed in Them. <u>F.V. Kondrashov</u> and <u>R.Ya. Popil'skii</u> . . . . .	141	29
The Use of Carbamides in the Production of Plaster Molds. <u>L.G. Tilevich</u> . . . . .	146	33

## INDUSTRIAL EXPERIENCE

Improving a Semiautomatic Plate-Making Machine. <u>N.D. Kuznetsov</u> and <u>A.E. Zubashenko</u> . . . . .	147	34
Apparatus for Continuous Control of the Moisture Content of Porcelain Bodies. <u>A.P.</u> <u>Kuznichenko</u> and <u>L.A. Artasevich</u> . . . . .	149	36
Eliminating the Deformation of Porcelain Products during Firing. <u>B.N. Olshevskii</u> . . . . .	150	37

## FROM THE FOREIGN JOURNALS

Device for Blowing Air into the Submachine Chamber for Vertical Drawing of Glass. . . . .	153	39
Method of Drawing Very Thin Plates of Glass . . . . .	153	40
Production and Use of Glass Laminates . . . . .	154	40
New Method for Cooling Tank Blocks. . . . .	154	40
Thermal-Shock Resistant Zinc-Borosilicate Glasses. . . . .	155	40
Storage and Transport Equipment for Batching Departments of Glass Plants. . . . .	156	41
Nuclear Fuel in the Form of Glass Fiber. . . . .	157	42
Apparatus for Measuring the Water Content of Ceramic Bodies. . . . .	158	42

## CHRONICLES

Third All-Union Conference on Glass State. <u>Z.M. Syritskaya</u> . . . . .	158	43
The Sixtieth Birthday of A.I. Avgustinik. . . . .	164	47

## REVIEWS AND BIBLIOGRAPHIES

"Glass". <u>M.G. Stepanenko</u> . . . . .	165	48
---	-----	----

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the National Science Foundation, administered by the American Ceramic Society.

Vol. XVII, No. 4

(Russian original dated April, 1960)

December, 1960

## CONTENTS

	PAGE	RUSS. PAGE
The Expansion of Glass-Tube Utilization . . . . .	167	1
The Production of Heat-Resistant Plate Glass by the Continuous Rolling Method. <u>K. T. Bondarev, M. I. Koz'min, A. G. Minakov, and G. M. Koval'chuk</u> . . . . .	170	4
The Polishing Capacity and Abrasion Resistance of Felt Containing Synthetic Fiber. <u>A. P. Aleksandrov and M. I. Popov</u> . . . . .	178	12
A Glass Tank Furnace for Double-Sided Working. <u>S. S. Drilenok</u> . . . . .	180	14
The Use of Glass Lubricants for Hot Deformation of Chrome-Nickel and Titanium Alloys. <u>L. K. Kovalev</u> . . . . .	181	15
New Types of Hollow Glass Blocks. <u>T. A. Gavazova</u> . . . . .	184	17
Increasing the Output of Conveyors for Casting Sanitary Earthenware Products. <u>P. V. Sokolov</u>	188	21
Semiautomatic Machine for Casting and Drying Porcelain Cups. <u>F. D. Kashtelyan</u> . . . . .	192	26
Changes in the Phase Composition in Loess-Like Argillaceous Materials during the Forming of Ceramics. <u>A. I. Nagornyi and L. A. Khokhol'kova</u> . . . . .	196	29
Apparatus for Measuring Channel Porosity. <u>K. K. Strelov</u> . . . . .	199	32
The Effect of Group-Two Metal Oxides on the Properties of Ground Enamels. <u>G. I. Belyaev</u>	200	33
INDUSTRIAL EXPERIENCE		
Experience with a Glass-Melting Furnace with a Developed Working Front. <u>V. P. Smirnov</u>	203	35
Equipment for Cutting Figured Glass. <u>V. S. Maslov, A. G. Goryachev, and V. N. Suvorov</u>	206	37
The Rational Arrangement of the Instruments on a Control Panel for Glass Furnaces. <u>P. A. Andriyanov</u> . . . . .	208	38
ECONOMIC CONSIDERATIONS		
Apropos the Article by B. G. Pronin "Evaluating the Work of Plate-Glass Factories" <u>M. M. Zagorchik</u> . . . . .	210	40
FOREIGN EXPERIENCE		
Unit-Melter Glass Furnace. <u>A. A. Sokolov</u> . . . . .	212	41
FROM THE FOREIGN JOURNALS		
Means of Increasing Glass-Tank Furnace Output. . . . .	214	42
New Methods of Measuring Glass Temperatures in Tank Furnaces . . . . .	215	43
High Processing Rates for Glass Pipe Using Vello's Method. . . . .	216	43
Small Tank Furnaces with Recuperators . . . . .	216	44
Tank and Channel of Transverse-Heated Tank Furnaces for the Production of Hollow Glass	217	44
Splitting Plates of Glass for Making Triplex. . . . .	217	44
Highly Mechanized Fritting Plant . . . . .	218	45
Bearings from Pyroceram. . . . .	218	45
Biscuit Firing of Wall Tile in Open-Flame Tunnel Kilns . . . . .	219	45
The Effects of Lithium-Containing Minerals on the Properties of Semiporcelain Sanitary Ceramics. . . . .	220	45

Available From Consultants Bureau

## CONTENTS (continued)

<u>Steklo i Keramika</u> Vol XVII, No 4, 1960	RUSS. PAGE	PAGE
Zircon Glazes for Sanitary Ceramics and Wall Tile . . . . .	220	46
CHRONICLES		
Conference on the Grinding and Polishing of Glass in Czechoslovakia. P. Ya. Bokin . . . . .	221	46
REVIEWS AND BIBLIOGRAPHY		
Glass in Building. L. A. Zhunina and N. N. Ermolenko. . . . .	223	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

Russian original dated May, 1960

Vol. XVII, No. 5

January, 1961

## CONTENTS

	RUSS. PAGE	PAGE
New Victories .....	225	1
Reserves in the Structural-Ceramics Industry in the Light of Advanced Plant Experience, <u>B. M. Gartsman</u> .....	228	5
The Economics of Forcing Tunnel-Kiln Cycles. <u>Ya. N. Smirnov</u> .....	233	9
The Use of Nepheline Concentrates for the Manufacture of Bottles from Dark-Green Glass. <u>A. Yu. Kaplan</u> .....	239	14
The Rational Design of Burners for Glass-Tank Furnaces. <u>A. I. Kukarkin</u> , .....	241	16
Increasing the Output and Quality of Medical Glass. <u>I. L. Bril'</u> .....	244	19
The Use of the Electron Microscope for Studying the Structure of Glass-Crystalline Materials. <u>V. I. Shelyubskii</u> and <u>N. M. Vaisfel'd</u> .....	248	23
Calculating the Degree of Homogenization of Glass in a Tank Furnace. <u>E. I. Smirnov</u> , .....	249	24
Changes in the Thermal Conductivity of Quartz Glass During Crystallization. <u>V. V. Pustovalov</u> .....	254	28
The Effect of the Properties of Silicate Melts on the Formation of Porous Structures During Bloating. <u>F. Ya. Kharitonov</u> .....	257	30
Grinding Scratches Due to Stones in Glass. <u>A. G. Minakov</u> .....	260	33
<b>INDUSTRIAL EXPERIENCE</b>		
Facing Tile from Waste Plate Glass. <u>V. I. Orzhevskii</u> and <u>V. I. Vanin</u> .....	263	35
Mechanizing the Production of Perfume Glass Containers. <u>D. P. Kropotov</u> .....	267	38
Machine for Applying Edge Decoration and Bands. <u>N. A. Kuz'min</u> . .....	269	40
Rapid Dust Extractor. <u>E. D. Zhuk</u> , .....	271	42
<b>LETTERS TO THE EDITOR</b> .....		
FROM THE FOREIGN JOURNALS	273	43
Glass Tank Furnace with a Slot-Type Channel, .....	275	44

Available From Consultants Bureau

## CONTENTS (continued)

Steklo i Keramika Vol XVII, No 5, 1960	RUSS. PAGE	PAGE
Fining glass with an electric current . . . . .	275	45
New method for increasing the strength of plate glass . . . . .	275	45
Continuous production of facing glass by the hot polishing method . . . . .	276	45
Semiconducting glass . . . . .	277	45
Producing glass plastics . . . . .	277	45
The adhesion of plastics to glass . . . . .	277	46
Improving the automatic blending of ceramic materials . . . . .	279	46
High production screens . . . . .	279	47
Boron-free Titanium white opaque glazes . . . . .	280	47
CHRONICLE . . . . .	281	47

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

Russian Original Dated June, 1960

Vol. XVII, No. 6

January, 1961

## CONTENTS

	RUSS. PAGE	PAGE
Article 119. Citizens of the USSR Have the Right to Rest . . . . .	284	1
New Pay Conditions for Glass Workers. <u>M. M. Zagorchik</u> . . . . .	287	5
Savings of Capital Investments and Reducing Transport and Exploitation Costs in the Glass Industry. <u>I. I. Ben'</u> and <u>G. S. Adamskaya</u> . . . . .	291	9
The Production of Polished Glass Plates in Large Sizes. <u>V. I. Orzhevskii</u> and <u>V. I. Vanin</u> . . . . .	295	13
Planning Automatic Production Lines for Polished-Glass Manufacture. <u>B. S. Temkin</u> . . . . .	302	19
The Upper Crystallization Temperature of Glasses Containing 16% Sodium Oxide. <u>M. V. Okhotin</u> . . . . .	305	23
Hardening Glass Insulators . . . . .	307	25
A New Method of Analyzing Gas in Glass. <u>V. T. Slavyanskii</u> , <u>E. N. Krestnikova</u> , and <u>M. V. Proskuryakov</u> . . . . .	312	29
The "Spontaneous" Destruction of Hardened-Glass Articles. <u>V. P. Kirichenko</u> . . . . .	317	33
On the Nature of Molten Glasses in the System Lead Oxide - Silica. <u>V. I. Minenko</u> , <u>S. M. Petrov</u> , and <u>N. S. Ivanova</u> . . . . .	318	34
Apparatus for Determining the Impact Resistance of Ceramic Tiles. <u>N. I. Pevzner</u> . . . . .	321	37
<b>INDUSTRIAL EXPERIENCE</b>		
The Use of Metallic Molds in the Manufacture of Ceramic Pipe. <u>A. G. Afonin</u> and <u>T. P. Kostenko</u> . . . . .	323	38
Chemically Desalinated Water for Silvering Glass. <u>M. I. Koz'min</u> and <u>S. A. Skripko</u> . . . . .	324	39
Substitute for Greek Sponges. <u>M. M. Brandina</u> . . . . .	326	41
LETTERS TO THE EDITOR	327	42
<b>FOREIGN EXPERIENCE</b>		
News in the Technique of Glass Production in Sweden. <u>N. V. Solomin</u> . . . . .	329	43
<b>FROM THE FOREIGN JOURNALS</b>		
The Gasification of Liquid Fuel in the Ceramic Industry. <u>G. Hilgers</u> and <u>H. Steinbach</u> . . . . .	331	44
Rubber Adhesive for Facing Tiles . . . . .	332	45
The Production of Sheet and Structural Glass in the United States. <u>H. Simpson</u> . . . . .	333	45
Reducing Waviness in Vertically Drawn Glass . . . . .	334	46
The Annealing of Optical Glass in Special Chambers . . . . .	335	46
Glasses Which Pass Infrared Rays . . . . .	336	47
Making Small Holes in Metals by Use of Glass . . . . .	336	47
Rubidium in Lead and Barium Glasses. <u>H. Simpson</u> . . . . .	336	47
Oil Cooling of Glass Forms . . . . .	337	47
<u>M. A. Smirnov</u> . . . . .	338	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

(Russian Original Dated July, 1960)

Vol. XVII, No. 7

February, 1961

## CONTENTS

	RUSS. PAGE	PAGE
Meeting the Demands of Domestic Building .....	340	1
New Glass Products for Building. <u>I. G. Gurvits</u> .....	342	4
Ceramics and Glass for Massive Building. <u>L. I. Lopovok</u> .....	347	8
Automation of Heating and Technological Processes in the Ceramic Industry. <u>B. E. Karsov</u> .....	351	12
Drying of Ceramic Suspensions by Atomization. <u>G. P. Filintsev, T. I. Taraeva, A. E. Alesovitskii,</u> <u>and I. M. Mikheev</u> .....	357	18
Forming Glass Films. <u>I. I. Kitaigorodskii and V. V. Rostokinskii</u> .....	361	21
Ways of Increasing the Mechanical Strength of Glass. <u>S. M. Brekhovskikh</u> .....	364	24
An Earthenware Glaze Based on "Erevanit" and Calcium Metasilicate. <u>M. G. Manvelyan,</u> <u>L. N. Alekseenko, and M. K. Avetisyan</u> .....	368	28
Zonal Type Glass Furnace. A Discussion. <u>M. I. Koz'min, and A. G. Minakov</u> .....	370	29
A Rapid Method for Determining the Silica in "Uralit", Clay and Kaolin. <u>T. F. Proskuryakova</u> <u>and E. M. Shtol'man</u> .....	373	32
A Rational Firing Schedule for Fireclay Blocks. <u>S. A. Blokh</u> .....	376	35
<b>PLANTS AND INSTITUTES</b>		
In the Dagestanskie Ogni* Factory. <u>K. L. Kozlenko</u> .....	381	38
Developments in the Production of Glass and Ceramics in the Moscow Region. <u>A. D. Evdokimenko</u> .....	382	39
<b>INDUSTRIAL EXPERIENCE</b>		
Temperature Control in a Glass Furnace. <u>V. M. Obukhov</u> .....	385	41
Pneumatic Regulator. <u>G. I. Lomidze</u> .....	386	42
Electric Lehrs. <u>A. V. Karavchuk</u> .....	387	41
A Rotary Table-Conveyer for Tile Sorting. <u>M. P. Spektor</u> .....	388	41
<b>FROM THE FOREIGN JOURNALS</b>		
Engineering Progress in the Production of Glass for Structural Purposes. <u>L. Pilkington</u> .....	391	46
<b>CHRONICLES</b>		
The All-Union D. I. Mendeleev Chemistry Conference. .....	392	47
<b>REVIEWS AND BIBLIOGRAPHIES</b>		
Diagrams of Glass-Forming Systems .....	394	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

Russian original dated August, 1960

Vol. XVII, No. 8

March, 1961

## CONTENTS

	RUSS. PAGE	PAGE
For the Further Progress of the Glass Industry.....	395	1
Investigating Glass Currents in Electric Furnaces for Producing Glass Fiber. <u>M. G. Chernyak, K. I. Blokh, A. I. Aliev and D. M. Kapustkin</u> .....	397	4
The Electric Conductivity of Certain Industrial Glasses in the Molten State. <u>K. A. Kostanyan and K. S. Saakyan</u> .....	401	7
On the Glassmelting Process. <u>D. B. Ginzburg</u> .....	403	10
The Use of Gas-Electric Heating in Tank Furnaces for Glass-Container Production. <u>A. E. Kotlyar</u> .....	406	12
Improving Burner Design for Glass-Tank Furnaces. <u>A. I. Kukarkin</u> .....	408	14
Controlling the Homogeneity of Glass.....	411	17
A New Method for Determining and Controlling Glass Uniformity. <u>V. I. Shelyubskii</u> .....	412	17
Apparatus for Controlling the Degree of Homogeneity of Glass. <u>L. I. Vidro, Yu. M. Khorol'skii and L. A. Mironenko</u> .....	418	22
Contracts for Glasses with Conducting Films. <u>V. M. Yanishevskii, E. A. Zhukovskaya and N. P. Reznik</u> .....	421	25
Means of Using New Techniques for Producing Enriched Kaolin. <u>S. A. Berzon, V. A. Meitina and A. V. Shtaverman</u> .....	422	26
Ceramic Filter Parts for Selenium Production. <u>M. A. Matveev and K. A. Smirnova</u> .....	426	30
INDUSTRIAL EXPERIENCE		
A Year's Use of a Tank Furnace for Double-Sided Working. <u>V. P. Smirnov</u> .....	431	35
Felt Polishers with Fibers Perpendicular to the Glass Furnace. <u>R. S. Zavorueva and G. A. Likhtenshtein</u> .....	432	37
A Continuous Production Line for Apparatus Glass. <u>V. I. Kas'yanova</u> .....	433	38
PLANTS AND INSTITUTES		
In the Planning-Design Bureau of the All-Union Institute of Structural Ceramics (NIISTroikeramika) <u>N. A. Petrov</u> .....	434	39

Available From Consultants Bureau

## CONTENTS (continued)

	<u>Steklo i Keramika</u> Vol XVII, No 8, 1960	PAGE	RUSS. PAGE
FOREIGN EXPERIENCE			
New Developments in the Production of Glass Fiber in Eastern Germany. <u>E. P. Kocharov</u> . . . . .	435	40	
FROM THE FOREIGN JOURNALS			
The Action of Deflocculents on Ceramic Slips and Plaster Molds. <u>R. Gauglitz</u> . . . . .	440	45	
Lukalox-New Ceramic Material . . . . .	442	46	
Fibrous Ceramic Materials. <u>S. G. Harmon</u> . . . . .	442	46	
Heat-Protective Glass Screens with Metallic Films. <u>Sklar a Keramik</u> . . . . .	442	46	
CHRONICLE			
Scientific Technical Conference on the Development of the Glass and Porcelain-Earth- enware Industries of the Ukraine. . . . .	442	47	

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

Russian original dated September, 1960

Vol. XVII, No. 9

April, 1961

## CONTENTS

	RUSS. PAGE	PAGE
Expanding the Production of Heat- and Sound-Insulating Materials from Staple Glass Fiber. <u>Ya. A. Shkol'nikov and E. P. Kocharov</u> . . . . .	445	1
Glazed Wall Tiles from Local Low-Fusing-Point Clays. <u>A. A. Kopeikin and L. M. Blyumen</u> . . . . .	450	6
Rapid Running-In Schedules for Glass Furnaces. <u>V. A. Gel'man</u> . . . . .	454	10
High-Temperature Resistant Inorganic Fibers and Their Properties. <u>M. S. Aslanova</u> . . . . .	459	15
Optics - A New Use for Glass Fiber. <u>K. I. Blokh, R. S. Shevelevich, and A. N. Derevyagin</u> . . . . .	463	19
Heat-Resistant Coverings for Iron. <u>A. A. Appen, E. A. Antonova, and L. A. Kuznetsova</u> . . . . .	467	22
Increasing the Thermal-Shock Resistance of Glass by Thermochemical Treatment. <u>I. A. Boguslavskii</u> . . . . .	472	26
Iron-Free Talcites from Kirgiteisk. <u>N. L. Polyakova, P. P. Smolin, and A. M. Èidel'kind</u> . . . . .	474	28
The Possibility of Determining the Crystallization Capacity of Glass from Its Composition. <u>L. N. Urusovskaya</u> . . . . .	478	33
INDUSTRIAL EXPERIENCE		
The Manufacture of Porcelain by Hot Casting Under Pressures. <u>N. G. Mitin, I. N. Zubatova, Z. Z. Romanovskaya, T. I. Kudrina, and B. I. Vishnevskii</u> . . . . .	484	38
Semiautomatic Machinery for Aerographic Coloring of Dinnerware and an Automatic Weighing Device for Plaster. <u>M. N. Lyanda and M. G. Ryban</u> . . . . .	487	41
Complexometric Determination of Alumina in High-Alumina Materials. <u>O. A. Dubova, K. I. Begel'fer, P. A. Sazonova, and K. M. Puntikova</u> . . . . .	489	43
PLANTS AND INSTITUTES		
Some Questions on the Theory of Glass Grinding. . . . .	491	45
FROM THE FOREIGN JOURNALS		
An Electric Glass-Melting Furnace . . . . .	492	45
The Use of Ultrasonics for Cutting Glass, French Patent No. 1182187. . . . .	492	45
Tunnel Kiln for Firing Ceramics, French Patent No. 1185972. . . . .	493	46
The Use of an Arc Sieve for Wet Purification of Contaminated Clays. <u>H. Kleg</u> . . . . .	493	46
CHRONICLE		
A Conference on the Mechanization and Automation of Glass Production. . . . .	494	46
REVIEWS AND BIBLIOGRAPHY		
New Books. . . . .	496	47

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

Russian Original Dated October, 1960

Vol. XVII, No. 10

April, 1961

## CONTENTS

	RUSS. PAGE	PAGE
The Manufacture and Use of Light-Sensitive Glass. K. T. Bondarev and F. Ya. Borodai. ....	500	1
A New System for Calculating the Coefficient of Thermal Expansion of Silicate Glasses. L. I. Demkina. ....	503	5
Methods of Detecting Stones and Waviness in Glass. M. A. Bezborodov. ....	510	11
Properties of Glasses in the System $V_2O_5-P_2O_5$ . B. Nador. ....	517	18
Factory Experimental Department. I. G. Gurvits and V. A. Zhelezov. ....	521	21
The Glass System $Na_2O-TiO_2-SiO_2$ as a Basis of Enamels for Aluminum. V. V. Vargin and L. L. Gutrova. ....	522	22
Investigating the Interaction of Glaze with Body by the Tagged-Atom Method. E. I. Zavarzina. ....	525	26
Granite - Raw Material for Making Electrotechnical Porcelain. P. M. Bugai, P. M. Bykov, and R. M. Boginskii. ....	530	30
INDUSTRIAL EXPERIENCE		
A New Technology for Ceramic Pipes. E. V. Petrov. ....	533	33
Mechanization of Glass Cutting. I. V. Malevanyi. ....	535	35
A Semiautomatic Machine for Glazing Flatwares. M. N. Lyanda, M. G. Ruban. ....	536	36
PLANTS AND INSTITUTES		
The Collective of the Konstantinovsk "Avtosteklo" Factory Struggles for Technical Progress E. L. Kotlyarov. ....	538	38
Experience at the "Druzhnaya Gorka" Factory. L. L. Nikanorov. ....	542	40
LETTERS TO THE EDITOR	543	41
FROM THE FOREIGN JOURNALS		
Successes in Ceramic Machine Building. ....	548	44
The Use of Organic Compounds for Producing Porous Ceramics. ....	549	45
An Investigation of the Factors Affecting the Strength of Glass Fiber. ....	549	45
The Effect of Titanium Oxide on the Viscosity and Surface Tension of Soda-Calcia-Silicate Glass. ....	550	46
CHRONICLE		
Conference on the Production of Curved Autotransport Glass. A. N. Kovalevskii. ....	551	46

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

(Russian Original Dated November, 1960)

Vol. XVII, No. 11

May, 1961

## CONTENTS

	RUSS. PAGE	PAGE
For Further Technical Progress.....	555	1
The Relationship Between the Output of a Glass Furnace and the Heat Schedule, A. I. Rozhanskii .....	558	5
A Continuous Process for Melting and Conditioning High-Zircon Glass. M. I. Koz'min .....	561	7
The Effect of Different Factors on the Mechanical Properties of Glass Fibers. M. S. Aslanova, .....	563	10
Calculating Residual Strains in Glass Goods during a Complex Cooling Schedule. I. I. Vidro and V. S. Koshelev, .....	569	16
Centrifugal Feeder for Supplying Rouge Suspensions to the Polishing Machines. A. G. Minakov, .....	571	18
Indelible Color on Bottles Instead of Labels. I. I. Vol'fenzon .....	574	21
Effective Working Schedules for Roller Mills. L. L. Koshlyak .....	576	23
Determining the True Magnitude of Open Porosity. A. S. Berkman, I. G. Mel'nikova, and E. I. Fedotova, .....	580	27
Using the Method of Reciprocal Displacement of Liquids for Determining the Pore Sizes of Ceramic Products. T. S. Blokh, R. M. Zaionts, and L. K. Sovetova, .....	583	30
The Effect of the Grain Size of Kaolinite on the Technological Properties of Kaolin. V. N. Lednik, ..	587	33
INDUSTRIAL EXPERIENCE		
Joining Two ISHPs Machines into One Unit. G. I. Mitkevich .....	591	36
A Universal Clamp for Suspending Glass during Hardening. V. N. Suvorov .....	592	37
A Muffler. A. A. Popkova .....	594	39
A Regulator for Placing Bottles in an Annealing Lehr. D. S. Grebenyuk and V. S. Chernopyatov, .....	595	40
Pneumatic Equipment for Handling Alumina. M. S. Kerpataya .....	596	41
A Rapid Method for Determining the Moisture Content of Ceramic Bodies and Materials. T. G. Zazanashvili .....	597	42
ANSWERS TO READERS' LETTERS		
The Connection Between Structural Oxides and their Tendency to Glass Formation. T. A. Siderov .....	599	43
K. A. Myasnikov's Sixtieth Birthday.....	604	47
FROM THE FOREIGN JOURNALS		
Lower Grinder of Conveyors for Double-Sided Grinding of Plate Glass.....	605	47
The Strength of Glass and Its Structure.....	605	47

Available From Consultants Bureau

## CONTENTS (continued)

Steklo i Keramika  
Vol XVII, No 11, 1950

RUSS. PAGE PAGE

Improved Molds for Bending Glass, . . . . .	606	48
Building Tank Furnaces from Unfired Blocks, . . . . .	606	48
Rational Method of Bending Glass for the Production of Triplex, . . . . .	607	48

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

(Russian Original Dated December, 1960)

Vol. XVII, No. 12

July, 1961

## CONTENTS

	RUSS. PAGE	PAGE
Converting to Natural Gas: Means of Increasing Furnace Output. <u>F. A. Oblival'nyi,</u> <u>A. I. Vainshtein, and B. G. Pronin</u> .....	609	1
The Electric Properties of Glass in the System $V_2O_5 - V_2O_4 - P_2O_5$ . <u>I. I. Kitaigorodskii, V. K. Frolov,</u> <u>and Kuo-Cheng</u> .....	613	5
The Influence of the Composition of Acid Baths on the Strength of Plate Glass. <u>V. A. Dubrovskii</u> <u>and O. V. Guzhavin</u> .....	616	8
Calculating Certain Tank-Furnace Parameters. <u>E. I. Smirnov</u> .....	621	12
The Use of Metal Molds in the Production of Curved, Hardened Automobile Glass. <u>S. I. Malyshev</u> .....	625	15
Attempt to Make Large Accumulator Jars by Mechanized Methods. <u>A. Kh. Miller</u> .....	626	16
Purple Luster for Coloring Glass and Porcelain. <u>S. G. Tumanov</u> .....	628	18
On the Submicroneterogeneity of the Structure of Glass. <u>K. T. Bondarev and V. A. Minakov</u> .....	633	22
Wall Tiles from Local Low-Fusing Clays. <u>Yu. G. Shteinberg</u> .....	641	27
Applying Permanent Labels to Glass, Porcelain and Other Dielectrics. <u>R. A. Lukatskaya,</u> <u>Yu. P. Danilov, and M. P. Skvortsov</u> .....	648	33
LETTER TO THE EDITOR		
On the Spectral Analysis of Glass, Ceramics and Raw Materials. <u>A. V. Korostov</u> .....	649	34
INDUSTRIAL EXPERIENCE		
Complex Mechanization of the Batch Department. <u>N. P. Ponomarev</u> .....	649	35
Homogenizing Quartz Sand for Glass Melting. <u>V. P. Kirichenko</u> .....	651	37
The Electrocarr EK-2 with Self-Raising Body. <u>V. P. Garkavenko</u> .....	652	38
An Improved Magnetic Separator. <u>K. S. Makarenko</u> .....	653	38
A Pneumatic Mold Holder for Producing Pressed Goods. <u>S. I. Litvinov</u> .....	653	39
Clamps for the Glazing Machine PG-1. <u>M. N. Lyanda and M. G. Ruban</u> .....	654	39
PLANTS AND INSTITUTES		
Equipment and Apparatus from Ceramics. <u>M. V. Gardya</u> .....	655	4
CHRONICLE		
Change in the Window Glass Standards .....	656	4

Available From Consultants Bureau

## CONTENTS (continued)

<u>Steklo i Keramika</u> Vol XVII, No 12, 1960	PAGE	RUSS. PAGE
FROM THE FOREIGN JOURNALS		
Using the Doghouse for Preliminary Fritting of the Batch. <u>W. Lichn</u> . . . . .	657	42
Automatic Production of Large-Capacity Glass Containers . . . . .	657	42
Equipment for Continuous Forming of Plate Glass . . . . .	658	42
Causes of Imperfections in Polished Plate Glass. <u>E. Brüche</u> . . . . .	658	42
On the Nature of Cracks on the Surface of Glass. <u>F. Ernsberger</u> . . . . .	659	43
New Types of Universal Bond for Glass. <u>A. Foulon</u> . . . . .	660	43
Author Index, Vol. XVI, Nos. 1-12. . . . .	663	
Tables of Contents, Vol. XVII, Nos. 1-12 . . . . .	665	

Available From Consultants Bureau

# Glass and Ceramics

A translation of Steklo i Keramika, an organ of the Ministry of the  
Construction Materials Industry of the USSR

The publication of this translation of Steklo i Keramika is supported by a grant from the  
National Science Foundation, administered by the American Ceramic Society

(Russian Original Dated December, 1961)

Vol. XVIII, No. 12

May, 1962

## CONTENTS

RUSS.  
PAGE PAGE

A Rational Type of Checker for Regenerators of Glass Furnaces. <u>A. A. Sukhov</u> . . . . .	597	1
Volatility of Fluorine-Titanium Flints. <u>L. I. Demkina, L. N. Urusovskaya, and A. S. Chizhova</u> . . . . .	601	4
Distribution of Strains in the Plate Field. <u>V. I. Vanin</u> . . . . .	605	7
The Basic Physicochemical Processes of Modern Methods of Silvering Glass. <u>I. I. Borisova</u> and <u>V. A. Ryabov</u> . . . . .	607	8
Quantitative Evaluation of the Sensitivity of Clays to Drying. <u>M. S. Belopol'skii</u> . . . . .	611	12
The Thermal Conductivity of Refractory Powders and Sintered Ceramics. <u>V. V. Pustovalov</u> . . . . .	618	17
Semiautomatic Machines for Grinding and Polishing Porcelain. <u>S. M. Tsenter</u> . . . . .	621	19
Gas Evolution During the Reaction of Phosphate Enamels with Aluminum. <u>P. P. Budnikov, K. P.</u> <u>Azarov, V. A. Lyutsedarskii, A. S. Migonadzhiev, and L. N. Omel'chuk</u> . . . . .	625	23
INDUSTRIAL EXPERIENCE		
A System for Automatic Blending of Batch Components and Feeding Them into the Furnace. <u>V. K. Egorov</u> . . . . .	627	25
Firing Ceramic Tiles in Multipassage Tunnel Kilns. <u>V. A. Idarand</u> . . . . .	631	28
Pressing Metlax Tiles. <u>Yu. S. Mitsev</u> . . . . .	633	30
Equipment for Glazing Ceramic Pipes. <u>M. R. Kalmykov and A. N. Voronin</u> . . . . .	634	31
Mechanizing the Production of "Matches" for Separating Glass Cullet. <u>I. G. Semenov</u> . . . . .	636	32
PLANTS AND INSTITUTES		
Sazonovsk Factory Increases Output. <u>S. S. Akulich</u> . . . . .	637	33
A New Glass Factory. <u>I. G. Prokhorov</u> . . . . .	638	34
ECONOMIC CONSIDERATIONS		
Means of Reducing the Production Costs in the Structural Ceramic Industry. <u>B. M. Gartman</u> . . . . .	639	34
FROM THE FOREIGN JOURNALS		
Glass Currents in the Working Channels of Tank Furnaces. <u>H. Becker</u> . . . . .	642	38
Investigating Glass Streams in Tank Furnaces with the Aid of Radioactive Isotopes. <u>L. Unger</u> . . . . .	643	38
Creating Rising Glass Currents in Tank Furnaces by Blowing in Gases. . . . .	644	39
The Role of Gas Diffusion in Glass Refining. <u>R. Doreinus</u> . . . . .	644	39
Melting Alkaline Silicates in Continuous Tank Furnaces. . . . .	645	40
Equipment for Applying Various Coverings to Plates of Glass. . . . .	646	40

Available From Consultants Bureau

## CONTENTS (continued)

	<u>Steklo i Keramika</u> Vol XVIII, No 12, 1961	RUSS. PAGE	PAGE
CHRONICLE			
Organizing the Production of Highly Resistant Electrofusion Cast Refractories .....	647	40	
First "Communist Labor" Factory .....	648	41	
First Prize at VDNKh .....	649	42	
CRITICISM AND BIBLIOGRAPHY			
New Books from Gosstroizdat .....	650	43	
INDEX TO VOLUME XVIII			
Author Index, Vol. XVIII, Nos. 1-12 .....	653		
Tables of Contents, Vol. XVIII, Nos. 1-12 .....	656		

Available From Consultants Bureau

## CONTENTS

Svarochiye Proizvodstvo  
No 8, 1961

Page  
Numbers

## SCIENTIFIC AND TECHNICAL

- |  |         |
|--|---------|
| Notch sensitivity of low-alloy and carbon steels in arc welding.<br>M. Kh. Shershorov and V. D. Kodolov.                 | 1 (1)*  |
| The external characteristic of the power supply in underwater welding with<br>$\text{CO}_2$ shielding. N. M. Madatov.    | 7 (4)   |
| The effect of temperature on the failure pattern of a welded joint.<br>M. M. Kraitchik and V. N. Maksimov.               | 15 (9)  |
| Fatigue strength of spot welded aluminium alloy joints under bending stresses.<br>V. P. Bochkarev and G. N. Veselotodin. | 18 (10) |
| Slug tests for spot welded and adhesive-bonded spot welded joints.<br>N. Kh. Andreev and V. N. Shavyrin.                 | 22 (13) |

## INDUSTRIAL

- |   |         |
|---|---------|
| The effect of repeated resurfacing on the wear resistance of rolling mill rolls.<br>K. V. Bagryanskii, F. Lavrik and V. N. Kal'yanov. | 26 (15) |
| Seam welding of fins to tubes. A. N. Briskman and V. N. Radzievskii.  | 32 (18) |
| Low interference attachment to oscillograph for control of resistance welding<br>conditions. M. P. Zaitsev and I. A. Rosev.           | 36 (20) |
| The automatic control of penetration in arc welding. A. I. Akulov and<br>V. K. Isachenko.   | 40 (23) |
| Resistance butt welding of rope wire. I. G. Gorlin.   | 44 (25) |

## EXCHANGE OF EXPERIENCE

- |  |         |
|--|---------|
| The electric cutting of multi-strand conductors with the simultaneous sealing of<br>their severed ends. A. A. Fofanov, V. K. Khovanets, A. F. Drobinin and<br>A. I. Prakhov. | 50 (29) |
|--|---------|

\*The figures in parentheses denote the page on which the article begins in the corresponding Russian issue.

Available From British Welding Research Association

## CONTENTS (Contd)

Svarochichye Proizvodstvo

No 8, 1961

The UONI-13/55 electrodes for welding in the presence of gaps and scale.  
A. A. Fil'chakov and F. Kh. Bel'tsev. 52 (31)

The welding of a crack in a rail and section mill stand.  
N. S. Bazhanov. 55 (32)

Vertical mould welding of rings using an electrode comb. V. N. Kal'yano. 56 (32)

Plug and socket switch for welding tractor. A. F. Galochkin. 57 (33)

Machine for removing coating from electrode rejects. G. N. Strekalov. 58 (33)

## DISCUSSION

Electro-slag welded joints without heat treatment. B. A. Kokh. 59 (34)

The efficacy of heat treatment in the case of welded heavy press frames.  
A. F. Silaev and N. A. Ignat'ev. 71 (40)

## NEWS

In the Welding Section of the Central Managing Board of the Scientific and Technical Division of the Machinery Industry (TsP NTO Mashprom).  
G. A. Maslov. 78 (43)

Scientific and Technical Conference on Railway Transport Weld Quality Control  
(Abridged). 79 (44)

## REVIEWS AND BIBLIOGRAPHY

Review of the Book 'Gas Welding and Cutting Equipment and Technology'  
G. L. Petrov and N. G. Burov. 80 (45)

Soviet literature on welding. V. A. Nevezkii. 82 (46)

Available From British Welding Research Association.

"WELDING PRODUCTION" SEPTEMBER 1961

CONTENTS

Svarochiye Proizvodstvo  
No 9, 1961

Page  
Numbers

SCIENTIFIC AND TECHNICAL

- |   |         |
|---|---------|
| An amendment to make the Saha equation more precise. K. K. Khrenov.   | 1 (1)   |
| The projection welding of components made of the D16A-BM alloy. V. A. Gillevich.  | 6 (4)   |
| New control circuits and apparatus for welding. M. P. Zaitsev.  | 10 (6)  |
| Investigation of the effective powers of heating sources in the oxy-acetylene cutting of mild steel. V. S. Golovchenko. | 15 (9)  |
| True thermal efficiency in the gas-shielded arc welding of copper. L. E. Fedotov and V. V. Verob'ev.                    | 19 (11) |

PRODUCTION

- |  |         |
|--|---------|
| Flame spray hardfacing with wear-resisting metal. A. L. Kozlovskii and I. I. Iskol'dekii.                            | 22 (13) |
| Methods of preventing welding distortions analysed from the economic point of view. A. I. Faerman and A. N. Rezanov. | 30 (17) |
| A machine for welding flanges to tubes. M. A. Tarnarutskii, B. Kh. Zhelobov and V. A. Brevtsev.                      | 36 (20) |
| Automatic welding of the flanges and vertical webs of overhead travelling crane main girders. M. M. Krivenko.        | 40 (22) |

EXCHANGE OF EXPERIENCE

- |   |         |
|---|---------|
| Semi-automatic submerged arc welding of 2-3 mm thick shells. V. I. Leppel'.   | 44 (25) |
| Polyvinylchloride sheet welded under site conditions. K. I. Zaitsev.  | 45 (26) |
| The single side argon tungsten-arc welding of steel sheet, with the minimum reverse side reinforcement. Yu. I. Kulov. | 47 (27) |
| The production of type AN-8 flux from AN-348A and AN-20 fluxes. A. V. Byatsov, A. P. Shalimov and A. K. Shaban.       | 48 (28) |

\*The figures in parentheses denote the page on which the article begins in the corresponding Russian issue.

Available From British Welding Research Association

CONTENTS (Contd)

Svarochiye Proizvodstvo  
No 9, 1961

Acetylene generators made more frost-resistant. V. V. Mavrin	49 (28)
DISCUSSION	
Urgent problems regarding the further improvement in the training of welding engineers. N. M. Budnik and M. M. Dubashinskii	50 (29)
Calculation of the effectiveness of various methods of welding main pipe lines. M. G. Mintz	54 (31)
SAFETY PRECAUTIONS	
Working conditions when arc welding aluminium and aluminium alloys. E. I. Vorontsova, T. S. Karacharov and K. P. Voshchanov	59 (33)
Dry powdered metal flash-back arresters for natural gas. I. I. Strizhevskii and D. I. Tsvetnitskii	65 (36)
INFORMATION	
The Belorussian Scientific and Technical Welding Conference. A. I. Shvykova	71 (40)
The Second Siberian Scientific and Technical Conference on Welding and Hardfacing. V. F. Tyurin	72 (41)
CRITICISM AND BIBLIOGRAPHY	
Review of the book "Mechanisation of resistance welding" by S. E. Semyschkin. M. M. Popokhin	75 (44)
Soviet inventions in welding engineering	77 (45)
Soviet literature on welding. V. A. Novikov	79 (46)

Available From British Welding Research Association

Teoriya Veroyatnostei i ee Primeneniya

Vol VI, No 2, 1961

CONTENTS

Limit theorems for sums of independent variables taking into account large deviations. I	
	YU. V. LINNIK 131
On multi-dimensional regular stationary processes .....	R. F. MATVEEV 140
On linear estimation theory for an infinite number of observations ..	JAROSLAV HÁJEK 169
Inhomogeneous Markov chains .....	T. A. SARYMSAKOV 178
Some limit theorems for random functions. II ..	V. A. VOLKONSKI and YU. A. ROZANOV 186

SHORT COMMUNICATIONS

On the sufficient statistics for stationary Gaussian random processes ....	M. ARATO 190
Concerning a certain probability problem .....	V. M. ZOLOTAREV 201
Some queuing problems with restrictions .....	I. N. KOVALENKO 204
Invariability of the strong Markov property in the transformations of Dynkin	
	LEUNG CHI-SON 209
On the connection between the concepts of collectives of Mises-Church and normal	
Bernoulli sequences of symbols .....	L. P. POSTNIKOVA 211
Estimating the density of the probability distribution for random processes in	
systems with non-linearities of piecewise-linear type .....	E. M. KHAZEN 214
A summary of reports given at the meetings of the Seminar on Mathematical Statistics,	
1958, Academy of Sciences of the USSR .....	220
Missing and extra observations in analysis of variance .....	W. KRUSKAL 227
Reviews and bibliography.....	227

Available From Society for Industrial and Applied Mathematics

The Problem of Investigating an Automatic Control System for a One-Stage Grinding Cycle, by G. A. Khan and V. V. Smirnov....	1	(1)
Flotation of Copper Cement with Dixanthogenates, by A. A. Golikov.....	10	(10)
An Investigation of Processes Occurring when Debismuthizing Lead, by G. S. Rozhavskii and M. P. Smirnov.....	13	(13)
Refining Zinc by Rectification, by V. V. Krapukhin and L. G. Povedskaya and S. A. Ershova.....	24	(23)
Remelting High Purity Cathodic Zinc, by D. P. Zosimovich and N. A. Shvab.....	29	(27)
Experimental Hydrodynamic Calculation of FluoSolid Roasting Furnace, by I. G. Martyushkin.....	34	(32)
Testing a New Version of Suspension Smelting of Copper Concentrates, by I. I. Penzimonsh, V. G. Shchurovskii and S. Kozhakhmetov.....	41	(39)
FluoSolid Roasting of Sulfidic Gold-Containing Concentrates, by I. I. Kershanskii and G. S. Gubaullin.....	46	(45)
System of Automatically Controlling the Process of Neutralizing Solutions, by I. I. Belyayev.....	52	(51)
Density of Aluminate-Alkali Solutions, by E. Z. Vydrevich and M. A. Zaitseva.....	57	(55)
Investigating the Process of Decomposing Zirconium by Sintering with Limestone, by G. E. Kaplan, T. D. Uspenskaya and T. V. Pryanishnikova.....	61	(59)
Effect of Apparent Changes in the Specific Gravity of Molten Metal Caused by Electromagnetic Forces, by L. A. Verte.....	64	(61)
Production of Plastic Tantalum from Electrolytic Powders, by V. M. Amosov.....	68	(65)
The Problem of Heat Exchange Between Castings and Ingot Molds, by K. L. Sheptunov.....	76	(72)
Dmitrii Mikhailovich Yukhtanov.....	81	(77)
The Joint Plenum of the Ferrous and Non-Ferrous Scientific and Technical Societies, by V. A. Frolov.....	83	(79)
A Conference on Conversion Questions, by Ya. Sh.....	86	(81)
Interfactory School on Mechanizing and Automating the Ore Dressing Plants in Kazakhstan, by V. Maslov.....	91	(85)
The Economics of Non-Ferrous Metallurgy, by S. A. Perevukhin, et al - Reviewed by V. I. Smirnov and A. Ya. Azplavny		
New Technical Literature.....	97	(88)
The Ore Dressing Plant in Toquepala (Peru), by L. Sh.....	101	(91)
Meeting of the Standing SEV Commission for Non-Ferrous Metallurgy.....	105	(95)

Note: Numerals in parentheses represent page numbers in Russian original.

Available From Primary Sources

SOVIET PHYSICS USPEKHI

VOLUME 4, NUMBER 6

MAY-JUNE 1962

Uspekhi Fizicheskikh Nauk

CONTENTS

Vol LXXV, No 3-4, 1961

	Page	Russian Reference
M. V. Lomonosov and the Development of Physics . . . . .	841	75, 397
The Achievement of M. V. Lomonosov in the Field of Automation of Measurements . . . . .	850	75, 411
The Microtron . . . . .	857	75, 421
Paramagnetic Absorption of Sound . . . . .	880	75, 459
Some Results of IGY and IGC Research on the Aurora and Night Glow . . . . .	904	75, 501
Intensities in the Infrared Absorption Spectra of Polyatomic Molecules . . . . .	919	75, 527
Structural Investigation in Crystals by the Method of Nuclear Magnetic Resonance . . . . .	947	75, 585
Author Index to Volume 4 . . . . .	975	
Analytic Subject Index to Volume 4 . . . . .	977	

Available From American Institute of Physics

# Russian Chemical Reviews

Uspekhi Khimii, Vol XXX, No 7, 1961

## CONTENTS

	PAGE	
(813)	347	The Wittig reaction L. A. YANOVSKAYA
(846)	362	Vibrational spectra of organophosphorus compounds E. M. POPOV, M. I. KABACHNIK, and L. S. MAYANTS
(877)	377	Efficiency criteria in gas chromatography A. A. ZHUKHOVITSKII and N. M. TURKEL'TAUB
(895)	386	The dielectric investigation of molecular relaxation in polymers G. P. MIKHAILOV and T. I. BORISOVA
(914)	396	Electrode properties of ion-exchange membranes E. A. MATEROVA and F. A. BE LINSKAYA
(932)	-	Japanese Chemical Writing — Read It Yourself H. M. POWELL Translated into Russian from Proc. Chem. Soc., 138 (1960)

The Russian original occasionally contains review articles translated from foreign periodicals. With few exceptions (e.g. Chinese sources) these are not included in the cover-to-cover translation.

Available From Cleaver-Hume Press Ltd.

HERALD OF COMMUNICATIONS

[Following is a complete translation of Vestnik Svyazi (English version above), Issue 5, Moscow, May 1962. Both covers and the Table of Contents of this Russian language publication were included in the translation.]

A Monthly Industrial-Technical Journal of the USSR  
Ministry of Communications  
Twenty-Second Year of Publication  
Svyaz'izdat  
(State Publishing House for Electrocommunications)

<u>Table of Contents</u>	<u>page</u>
TOWARD RADIO DAY	
EDITORIAL - Let Us Develop and Improve the Facilities for Communications, Radio Broadcasting, Television, and the Wire-Broadcast Service.	1
COMMUNICATIONS EQUIPMENT	
S.I. KATAYEV, L.I. KURDOV, V.P. KHROMOV, V.I. UL'YANOV, A.N. DROKHANOV - The Electronic Rear Projection Installation at the Moscow Television Center.	8
N.K. ARTYUSHIN, G.Ya. SUVOROV - Constructing and Adjusting a Radio Relay Line Using RM-24/A Equipment.	21
Ye.R. MILYUTIN, R.A. PERTSOVSKIY, S.S. ROGOVENKO - An Installation for Plotting Radiation Patterns of Operating Antennas by Means of a Helicopter.	29

<u>Table of Contents (cont.)</u>	page
AT AN ENTERPRISE OF COMMUNIST LABOR	
S.G. VOLKOV, A.V. KIYASHKO - An Advanced Radiocenter.	33
ORGANIZATION AND OPERATION OF COMMUNICATIONS FACILITIES	
V.A. SAVANCHUK - The Ukraine at the Threshold of Complete Extension of Radio Rebroadcast Service Facilities.	41
G.P. SAMOYLOV, Ye.A. RYMANOV - A Mobile Workshop for Repairing Television and Radio Receivers.	47
COMMUNICATIONS WORKERS, TO THE VILLAGE	
In the Ministry of Communications USSR	55
N.M. LYUBAVIN - More Attention to Rural Telephone Communications.	56
T.F. LOBANOV - The Quality of the Services Rendered the Rural Population Must be Improved.	60
COMMUNICATIONS WORKERS' CONFERENCE	
CORRESPONDENCE - We Must Exert Great Effort To Resolve our Main Task.	65
S.G. ZHIBOTKHOV, K.I. YAMPOL'SKIY - The Use of Gas-Fueled Soldering Torches in Repairing Communications Cables.	74
I.A. LAMM - Prospects for Production Mechanization and Automation of Postal Operations.	79
A.S. MARINICH - We Must Inspect Our Postal Rules.	89
The Work of Communications Organizations Must Meet Present Requirements.	93
A. M. AL'TSHUL' - The Photo-Newspaper of the Bukovina Communications Workers.	104
L.N. Gordiyenko - Useful Proposals.	109

<u>Table of Contents (cont.)</u>	page
Reliability of Operations Indices.	111
Not Even a Single Case of Waste.	112
To Help Television-Facility Workers.	113
Improving the Technical Operation of Aerial Communications Lines,	115
New Communications Equipment.	117
Serving the Fisherman at Sea.	120
On Social Principles.	121
Automatic Dial Exchanges in the Villages.	121

# PROBLEMS OF ONCOLOGY

---

Volume 7 No.8.

1961

---

## Voprosy Onkologii

### TABLE OF CONTENTS

V.S. Rogacheva: Immediate and Long Term Results of Radical Surgery in Cancer of Esophagus . . . . .	1
G.L. Ratner: Plastic Repair of Vessels in Oncological Surgery . . . . .	5
V.I. Panov, and E.L. Fraifeld: Angioarchitectonics of Diffuse Carcinoma of the Pyloric Portion of the Stomach . . . . .	8
M.K. Dimitrov: The Significance of Age and Sex in the Development of Malignant Tumors . . . . .	11
V.A. Smirnov: Skin Cancer in Kazakhstan . . . . .	15
V.P. Tobilevich: The Value of Individualization and Standardization in Rational Radiotherapy for Cancer of the Uterine Cervix . . . . .	21
R.M. Sokolovskii, A.B. Derazhne, and Z.I. Malysheva: Morphological Diagnosis of Carinoma in Situ of the Uterine Cervix . . . . .	33
N.I. Vol'fson: Peculiarities of Differentiation and of Mitotic Division of the Epithelium of the Uterine Cervix and Vagina in Mice . . . . .	43
Yu.N. Bordyushov: The Influence of the Gonadotropin Activity of the Hypophysis on the Development of Intrasplenic Ovarian Grafts in Rats . . . . .	49
N.V. Lazarev, and G.I. Felistovich: Correlation of the Action of Pyrimidine Stimulators and Inhibitors On Cell Growth and Proliferation . . . . .	52
E.M. Vermcl', and S.A. Syrkina-Kruglyak: Contact Selection of Antineoplastic Preparations (On Ascitic Tumor Cells) . . . . .	58
B.E. Aizenman, T.P. Mandruk, M.O. Shvaiger, E.A. Shvaiger, and E.A. Kuprianova: The Sensitivity of Ehrlich's Carcinoma To Dyes . . . . .	67

### BRIEF COMMUNICATIONS

I.A. Percslegin: An Unusual Case of Lymphogranulomatosis . . . . .	74
N.S. Anishin: The Development of Skin Cancer in Association With Urinary Fistula . . . . .	78
L.N. Filitis, and P.S. Massagetov: On the Antineoplastic Activity of Aristolochic Acid . . . . .	80

### PRACTICAL EXPERIENCE

E.P. Falilleyeva: Treatment of the Regional Metastases of Cancer of the Tongue . . . . .	82
I.F. Bratslavskii: Methods of Study of the Time of the First Consultation and of the Timeliness and Standards of Oncological Diagnosis . . . . .	86

### CHRONICLE

R.A. Mel'nikov, and L.I. Zalesskaia: General Meeting of the Enlarged Presidium of the All-Union Scientific Society of Oncologists on February 9-10, 1961 . . . . .	91
B.V. Milonov, and S.A. Degteva: Minutes of the 59th Meeting of the Scientific Society of Moscow and Moscow Oblast' Oncologists on December 29, 1960 . . . . .	97
S.A. Khordin, and O.G. Prokof'yeva: Minutes of the 57th Meeting of the Scientific Society of Leningrad and Leningrad Oblast' Oncologists . . . . .	99
N.G. Znachikovskii, and I.F. Yunda: Short Report of the Republic Presidium and Oblast' Scientific-Medical Societies of Oncologists of Ukraine S.S.R. for 1960 . . . . .	101

Available From Elsevier Publishing Company

Printed in The Netherlands

# PROBLEMS OF ONCOLOGY

Voprosy Onkologii

Volume 7 No. 9

1961

## TABLE OF CONTENTS

### ORIGINAL ARTICLES

N.S. Staroverova: Karyotypes of Rat Fibroblasts in "Spontaneous" Malignant Degeneration in Monolayer Cultures . . . . .	1
Min Wu: A Simple Method for Obtaining Clones from Human Cell Strains in Vitro . . . . .	7
N.T. Raykhlin and A.Kh. Kogan: The Development and Malignant Degeneration of the Connective Tissue Capsules Around Plastic Implants . . . . .	11
Ye.V. Smirnova: The Activity of Phenylalanine Hydroxylase in Hepatomas and Liver of Normal and Tumorous Animals . . . . .	15
N.N. Medvedev: Origin and Comparative Oncological Characteristics of Mice of the CC57W and CC57BR Strains . . . . .	20
S.N. Ruchovskiy and V.S. Gostev: The Ophthalmoreaction in Rabbits as a Method of Diagnosing Cancer in Man . . . . .	32
V.N. Kolmykova: An Attempt to Induce Leukemia in Guinea Pigs with the Blood of Patients . . . . .	36
I.S. Gul'ko: The Content of Zinc, Copper, Manganese, Cadmium, Cobalt and Nickel in the Blood, Organs and Tumors of Cancer Patients . . . . .	39
A.G. Nadzharov: Protein Fractions of Blood Serum in Patients with Cancer of the Stomach . . . . .	44
L.A. Frankfurt: External Secretion of the Pancreas and Assimilation of Food After Total Gastrectomy . . . . .	49
Yu.B. Vel'Yaminov: Cytological Examination of Wound Washings after Radical Operations for Breast Cancer . . . . .	53
M.A. Dolgova: Human Liver Lymphatics in Cancer . . . . .	58
V.G. Rukavishnikova: Metastatic Diffuse Carcinomatosis of the Liver . . . . .	62
T.P. Aleinikova: The Effect of the Site of the Tumor on the Course and Effectiveness of Therapy of Cancer of the Corpus Uteri . . . . .	65
V.A. Gremilov: Radiation Therapy in Cancer of the Penis . . . . .	70

### BRIEF COMMUNICATIONS

D.A. Barkov, and A.L. Krichevskii: Deep Lipomas of the Neck . . . . .	75
---	----

### PRACTICAL EXPERIENCE

E.V. Trushnikova: Benign Tumors of the Stomach . . . . .	79
N.I. Nagnibeda: Interthoracicoscapular and Interilioabdominal Amputations . . . . .	84

### REVIEWS

M.M. Maevaskii: Antitumor Antibiotics . . . . .	89
---	----

### CHRONICLE

V.N. Demin: The Third Leningrad City Oncological Conference . . . . .	97
Minutes of the 61st Meeting of the Scientific Society of Moscow Oblast' Oncologists on February 23, 1961 . . . . .	101

### BOOK REVIEW

Professor A.P. Shannin . . . . .	104
----------------------------------	-----

Available From Elsevier Publishing Company

Printed in The Netherlands

# PROBLEMS OF ONCOLOGY

1961

VOLUME 7

NUMBER 10

Voprosy Onkologii  
CONTENTS

**Original articles—**

A. P. LAZAREVA: Low-voltage short-focal Roentgen therapy of cancer of the skin of the orbital area . . . . .	1387
M. N. PICHUGINA: The features of the clinical course of adenocarcinomas of the cervix uteri . . . . .	1394
A. L. BOGOSLAVSKII and E. G. FRIDMAN: Carcinoma of the stomach arising after operation for peptic ulcer . . . . .	1401
A. N. NOVIKOV, V. V. RODIONOV and A. N. KERASHEVA: The longterm results of surgical treatment of lung cancer . . . . .	1409
D. M. RUTENBERG: A new approach to the surgical treatment of malignant disease of the epiglottis . . . . .	1418
B. D. KAUFMAN and Z. Z. SHNITNIKOVA: Methods of studying the causes of late diagnosis of malignant neoplasms . . . . .	1424
M. I. LERMAN: Transamination of amides in tissues of malignant tumours . . . . .	1431
E. A. SHERSTNEV: A comparative study of the nucleotide structure of ribonucleic acid in liver and hepatomas of mice . . . . .	1437
A. V. TYUFANOV: The biological properties of ribonucleic acid obtained from Rous sarcoma . . . . .	1440
L. I. CHARKVIANI: Experimental induction of carcinoma of uterus in rats by 9,10-dimethyl-1,2-benzanthracene . . . . .	1446
V. I. GEL'SHTEIN: The incidence of tumours among offspring of mice exposed to orthoaminoazotoluene . . . . .	1453
P. P. DIKUN: The fine structure of the fluorescence spectra of monomethyl derivatives of 1,2-benzanthracene . . . . .	1461
O. G. PERMYAKOVA and E. N. LOGINOV: Eosinophilic granuloma of the stomach . . . . .	1472
Yu. G. BOIKO: Malignant leiomyoma of the jejunum with metastases in the liver . . . . .	1475
A. I. DONATYSHAK and M. I. DUBOVYI: Prolonged cure of a case of seminoma with metastases . . . . .	1480

**Practice of oncology—**

M. G. SHCHERBINA, L. M. STUKOVA, S. V. STRUTSOVSKAYA and V. A. REPINA: The remote results of treatment of carcinoma of the corpus uteri with radioactive cobalt . . . . .	1482
A. F. KRIVOSHCHEKII: The diagnosis of tumours of the female genitalia . . . . .	1487
T. M. SVISTUNOVA: Experience of short-focal Roentgen therapy of haemangiomas of the skin in children attending the polyclinics . . . . .	1492

**Reviews—**

R. M. RABINOVICH: Lesions of the lungs and pleura due to radiation therapy of malignant neoplasms of the thoracic organs and mammary gland . . . . .	1499
R. M. RADZIKHOVSKAYA: The phenomena of enhancement of tumour growth . . . . .	1510

**Current events—**

V. YA. SHEVLYAGIN: The coordinating conference of laboratories studying the role of viruses in the origination of tumours . . . . .	1523
B. V. MILONOV and V. A. BOYADZHAN: Proceedings of the 62nd meeting of the Scientific Society of Oncologists of Moscow and Moscow Province on 30 March 1961 . . . . .	1525
S. A. KHOLDIN and L. Yu. DYMARSKII: Proceedings of the 58th meeting of the Scientific Society of Oncologists of Leningrad and Leningrad Province of 5 April 1961 . . . . .	1529
I. S. GINSBURG and A. G. ISMAILOV: The activities of the Scientific Society of Oncologists of the Azerbaijan Republic during 1960 . . . . .	1534

**Obituary—**

V. P. MIKHAILOV and M. P. PTOKHOV: To the memory of Nikolai Grigor'evich Khlopin	1537
--	------

Printed in Poland to the order of PWN—Polish Scientific Publishers  
by the Scientific-Technical Printing House (DRP), Warsaw

Available From Pergamon Press

# Industrial Laboratory

A translation of Zavodskaya Laboratoriya, a publication of the  
State Scientific-Technical Committee of the  
Council of Ministers of the USSR

Russian Original Dated November, 1961

Vol. 27, No. 11, pp. 1327-1450

May, 1962

## CONTENTS

	PAGE	RUSS. PAGE
<b>CHEMICAL METHODS OF ANALYSIS</b>		
The Use of Polarography in Organic Analysis. (Review) <u>I. A. Korshunov and A. L. Kalinin</u> . . . . .	1327	1323
The Polarographic Determination of Nitrocyclohexane in Caprolactam Manufacture. <u>Ya. I. Tur'yan and P. M. Zaitsev</u> . . . . .	1333	1329
Chromatographic Separation of the Hydroperoxides of Meta-Dilisopropylbenzene. <u>R. V. Kucher, M. A. Kovbuz and M. E. Teodorovich</u> . . . . .	1336	1331
The Determination of Aliphatic Amines in Industrial Effluent Waters. <u>Yu. Yu. Lur'e and V. A. Panova</u> . . . . .	1338	1333
Potentiometric Determination of the Degree of Hydrogenation of 2-Ethylanthraquinone. <u>N. A. Ivanova and L. M. Shtifman</u> . . . . .	1340	1336
The Amperometric Determination of Organic Substances and Hexavalent Chromium in Chromic Acid Solutions. <u>V. I. Ginzburg</u> . . . . .	1341	1337
Determining Microquantities of Iron in Indium and Gallium. <u>V. A. Nazarenko and G. V. Flyantikova</u> . . . . .	1344	1339
A Simplified Method for Determining Germanium with Phenylfluorone. <u>V. A. Oshman and V. M. Volkov</u> . . . . .	1345	1341
A Rapid Method for Determining Small Amounts of Copper in Zinc and Cadmium. <u>A. N. Grisevich and K. B. Kladnitskaya</u> . . . . .	1346	1343
The Sintering Method in the Analysis of Boron Carbide, Boron Nitride, and Borides of Metals. <u>K. D. Modylevskaya, M. D. Lyutaya, and T. N. Nazarchuk</u> . . . . .	1350	1345
An Accurate Method of Phase Analysis for Compounds of Lead, Ores, and Products of Enrichment. <u>N. A. Filippova, V. A. Korosteleva, and Chu Yueh-ying</u> . . . . .	1351	1346
The Quantitative Determination of High-Alumina Minerals in Aluminum Ores by Phase Analysis Methods. <u>E. M. Bradinskaya</u> . . . . .	1357	1352
Exchange of Experience . . . . .	1358	1353
<b>PHYSICAL METHODS OF INVESTIGATION</b>		
Short-Range Order and Physical Properties of Homogeneous Solid Solutions. <u>V. I. Iveronova and A. A. Katsnelson</u> . . . . .	1359	1354
Revealing of Dislocations by Ultrasonics. <u>Yu. F. Balalaev</u> . . . . .	1366	1362
Determination of Diffusion and Solubility Coefficients of Volatile Substances Dissolved in a Solid. <u>I. V. Postnikov and R. N. Rubinshtein</u> . . . . .	1368	1364
A Method for Measurement of Radioactivity of Spherical Specimens. <u>V. V. Moiseev</u> . . . . .	1374	1366
Some Problems of Fluorescent X-Ray Spectrometric Analysis. <u>V. P. Bykov and I. V. Sorokin</u> . . . . .	1376	1371
On the Dependence of the Line Strength of the Secondary Spectrum on Tube Voltage. <u>G. V. Pavlinskii and N. F. Losev</u> . . . . .	1378	1374
Determination of the Specific Gravity of Ion Exchange Resins in a Hydrated State. <u>N. I. Gel'perin, V. G. Ainshtein, and L. M. Klyueva</u> . . . . .	1380	1375
Determination of the Resistance of Metals to Corrosion Cracking. <u>V. V. Romanov</u> . . . . .	1383	1377

Available From Instrument Society of America

## CONTENTS (continued)

Zavodskaya Laboratoriya  
Vol XXVII, No 11, 1961

RUSS.  
PAGE PAGE

### MECHANICAL METHODS OF TESTING

An Analysis of Methods for Creep Strength Evaluation of Metals Operating Under Stress Relaxation Conditions with Periodic Loading. <u>N. V. Volkova</u> . . . . .	1385	1380
A Method for Investigation of the Life Span of Tubular Samples by Internal Pressure of Hydrogen. <u>M. B. Asviyan</u> . . . . .	1390	1385
On the Number of Specimens Necessary for Determining the Long-Term Strength of Heat-Resistant Steels. <u>D. N. Levitskii</u> . . . . .	1393	1388
Effect of Variable Test Conditions on the Long-Term Strength of Steel. <u>V. I. Kovpak</u> . . . . .	1395	1390
A Method for Testing Welded-Joint Specimens. <u>I. L. Mirkin, L. P. Trusov and N. A. Alekseeva</u> . . . . .	1398	1392
A Method for Determining the Plasticity Characteristics of Structural Steels with Respect to their Hardness. <u>M. P. Markovets</u> . . . . .	1401	1395

### INSTRUMENTS AND LABORATORY TECHNIQUE

Comparative Characteristics of Cyclic-Action Testing Machines with Hydraulic Excitation. <u>Yu. N. Morozov and Yu. E. Tyablikov</u> . . . . .	1407	1401
The Testing of Prestressed-Concrete Wire for Increase of Strain During Vibration. <u>V. I. Kokhno</u> . . . . .	1418	1412
Device for Measuring Transverse Strain by Means of Mirrors Suspended on Threads. <u>Yu. I. Yagn, L. V. Myakinin, and K. F. Kovalov</u> . . . . .	1419	1413
Automatic Strain Recorder. <u>L. G. Zybrev</u> . . . . .	1421	1415
The Use of the MI Machine in the Investigation of the Working-In of Friction Pairs. <u>M. V. Korogodskii</u> . . . . .	1423	1417
Testing Machine for Large-Size Specimens. <u>Kh. N. Dement'ev</u> . . . . .	1426	1420
Machine for Testing Mining Hoist Ropes. <u>G. P. Ksyunin and I. A. Korobov</u> . . . . .	1427	1421
Application of TK-Type Devices for the Testing of Plastics. <u>Ya. I. Bagril</u> . . . . .	1428	1422
Device for Investigating the Kinetics of Phase Transitions in Metals. <u>E. I. Estrin</u> . . . . .	1429	1423
Apparatus for Purifying Pyrogallol. <u>V. P. Martynin and E. V. Zernova</u> . . . . .	1431	1425
Exchange of Experience . . . . .	1432	1425

### ORGANIZATION OF LABORATORY WORK AND EXCHANGE OF VIEWS

A Fast Method for Determining the Fatigue Limit from the Critical Fatigue Stress. Comments by <u>V. S. Ivanova, S. Nedeshan, B. Horowitz, and A. M. Usov</u> . . . . .	1437	1430
---	------	------

### INFORMATION

A Conference on Methods and Apparatus for Testing Magnetic Materials. <u>N. G. Chernysheva and E. N. Chechurina</u> . . . . .	1443	1436
Conference of Subscribers to the Journal "Zavodskaya Laboratoriya" . . . . .	1445	1438

### REVIEWS AND BIBLIOGRAPHY

Micro-Indentation Hardness Testing. <u>B. W. Mott</u> , Reviewed by <u>V. D. Listyn</u> . . . . .	1446	1439
Czechoslovak Journals in Russian. . . . .	1448	1440

Available From Instrument Society of America

# Industrial Laboratory

A translation of Zavodskaya Laboratoriya, a publication of the  
State Scientific-Technical Committee of the  
Council of Ministers of the USSR  
(Russian Original Dated December, 1961)

Vol. 27, No. 12, pp. 1451-1604

June, 1962

## CONTENTS.

	PAGE	RUSS. PAGE
An Intellectual Titan of the 18th Century. Yu. A. Klyachko .....	1451	1445
CHEMICAL METHODS OF ANALYSIS		
Mercurimetric Indicators from the Azo Derivatives of 8-Hydroxyquinoline. A. I. Cherkesov,	1453	1447
The Rapid Oscilllopolarographic Determination of Chlorides. V. P. Gladyshev and R. Kalvoda .....	1456	1450
The Polarographic Analysis of Some Analogs of DDT. N. P. Romazanovich and K. G. Berezina .....	1459	1453
The Polarographic Analysis of Commercial Zinc Benzoate. E. Kh. Rud, S. Ya. Skachilova, and K. V. Kopylova .....	1460	1454
The Production Control of 2,4-Dichlorophenoxyacetic Acid by Potentiometric Titration in a Nonaqueous Medium. E. A. Gribova .....	1461	1455
The Potentiometric Determination of Acids in Mixtures from Acetyl Cellulose Production. E. A. Emelin and G. P. Svistunova .....	1464	1458
The Determination of Sulfur in Metallic Chromium. A. A. Fedorov, A. M. Krichevskaya and F. V. Linkova .....	1466	1460
The Determination of Tin in Ferromolybdenum. E. V. Silaeva and V. I. Kurbatova .....	1468	1462
The Determination of Iron, Aluminum and Manganese in Metallurgical Slags Using Trilon. V. A. Rad'ko and E. M. Yakimets .....	1470	1464
A Photocolorimetric Method for Determining Mercury. A. L. Gershuns, E. I. Vail', A. P. Mirnaya, I. A. Rastrepina, and L. V. Sigalova .....	1471	1465
The Determination of Hydrogen in Steel by the Anodic Solution Method. S. M. Beloglazov .....	1473	1468
The Phase Analysis of Alloys Based on Titanium. N. I. Blok, A. I. Glazova, N. F. Lashko, V. P. Kuraeva, and E. K. Molchanova .....	1475	1470
The Phase Analysis of Some Germanium Compounds. E. I. Sokolova and A. N. Gurovich ..	1477	1472
Exchange of Experience .....	1479	1474
PHYSICAL METHODS OF INVESTIGATION		
Certain Pressing Problems in Applied Electron Microscopy. (Review). V. M. Luk'yanchikov .	1480	1475
Origin and Interpretation of the Contrast on Electron Microscope Images of Metallic Foils. M. P. Usikov and L. M. Utevskii .....	1485	1481
Application of Microdiffraction in the Investigation of Metals by Means of Electron Microscopes. L. G. Orlov, M. P. Usikov, and L. M. Utevskii .....	1491	1486
Thinning of Metallic Specimens by Electrolytic Polishing for Investigations in X-Rayng Electron Microscopes. V. G. Kurdyumov, L. G. Orlov, and M. P. Usikov .....	1495	1490
Investigation of Ferric Oxide Powders in Electron Microscopes. O. N. Repkova .....	1498	1494
Preparation of Powder Material Specimens for Investigations in Electron Microscopes. S. T. Prokhorov .....	1500	1496

Available From Instrument Society of America

## CONTENTS (continued)

	<u>Zavod'skaya Laboratoriya</u>	<u>Vol. XXVII, No. 12, 1962</u>	RUSS. PAGE	PAGE
On the Method of Preparing Electrolytic Impurity Deposits for Investigations in Electron Microscopes. <u>G. A. Kokorin</u> .....	1501	1497		
Selection of the Preparation Method for Investigating the Structure of Sintered Aluminum Powder. <u>N. S. Gerchikov and N. I. Kolobnev</u> .....	1503	1498		
Investigation of Sintered Aluminum Powder by Means of Electron Microscopes. <u>A. I. Paisov and P'ang Ya-ch'en</u> .....	1504	1500		
Ultrasound Dispersion of Powdered Specimens for Investigations in Electron Microscopes. <u>Yu. S. Bulankin</u> .....	1506	1501		
Application of Electron Microscopy for the Investigation of Nonmetallic Impurities in Steel. <u>A. V. Smirnova and G. A. Kokorin</u> .....	1507	1502		
<b>MECHANICAL METHODS OF TESTING</b>				
A Method for Determining the Impact Strength of Steel by Fracture Analysis. <u>A. N. Krasil'shchikov and E. N. Shvach</u> .....	1510	1505		
Possibilities of Simplifying the Method of Determining the Components of Impact Strength. <u>A. S. Rakhmanov and L. S. Livshits</u> .....	1514	1510		
A Method of Measuring Impact Energy During the Impact Testing of Metals. <u>S. S. Ermakov and N. S. Prodan</u> .....	1517	1513		
On Impact Testing. <u>E. A. Silkin and A. F. Zasova</u> .....	1518	1514		
The Effect of the Stress Gradient on Tensile Strength During Brittle Rupture. <u>I. V. Navrotskii and Yu. S. Tomenko</u> .....	1523	1520		
A Technique for Determining the Internal Stresses in Press-Fit Joints by the Sachs Method. <u>M. M. Kobrin and L. I. Dekhtyar'</u> .....	1525	1523		
Exchange of Experience .....	1530	1527		
<b>INSTRUMENTS AND LABORATORY TECHNIQUE</b>				
Domestic Electron Microscopes for the Direct Examination of Solid Objects. A Survey. <u>Yu. M. Kushnir, D. V. Fetisov, L. B. Rozenfel'd, and A. M. Rozenfel'd</u> .....	1531	1528		
Some Problems of the Adjustment and Use of High-Resolving Power Electron Microscopes. <u>P. A. Stoyanov and N. M. Moseeva</u> .....	1538	1535		
Exchange of Views .....	1546	1543		
Author Index, Volume 27, Numbers 1-12		1555		
Tables of Contents, Volume 27, Numbers 1-12		1572		

Available From Instrument Society of America

Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki  
**CONTENTS**

Vol XLI, No 6 1961

	Page	Russian Reference
Quantum Galvanomagnetic Effects in n-InAs . . . . .	1209	41, 1699
Forbidden E1 Transitions in Tb <sup>159</sup> and Yb <sup>173</sup> . . . . .	1213	41, 1704
The Lifetime and Nature of the 686-kev Level in Re <sup>181</sup> . . . . .	1217	41, 1710
Elastic Scattering of 247-Mev Gamma Rays on Hydrogen . . . . .	1219	41, 1713
Change in the Concentration of Current Carriers in Bismuth Due to Admixtures of Selenium . . . . .	1225	41, 1722
Alpha Decay of Pu <sup>239</sup> . . . . .	1227	41, 1725
A New Isotope Er <sup>169</sup> . . . . .	1229	41, 1729
Investigation of Radioactive Decay of Np <sup>231</sup> . . . . .	1232	41, 1733
Energy Levels of the U <sup>232</sup> Nucleus . . . . .	1237	41, 1740
Proton-Proton Scattering at 8.5 Bev . . . . .	1243	41, 1748
Do In Seb, L. F. Kirillova, P. K. Markov, L. G. Popova, I. N. Slin, E. N. Tsyganov, M. G. Shafranova, B. A. Shakhbazyan, and A. A. Yuldashev . . . . .	1248	41, 1757
Investigation of the C <sup>12</sup> ( $\alpha$ , 4 $\alpha$ ) Reaction . . . . .	1252	41, 1761
S. S. Vasil'ev, V. V. Komarov, and A. M. Popova . . . . .	1254	41, 1763
Levels of the Si <sup>30</sup> Nucleus from the Si <sup>28</sup> (d, p)Si <sup>30</sup> Reaction . . . . .	1256	41, 1767
K. I. Zherebtsova, V. F. Litvin, Liu Chao-yien, and Yu. A. Nemilov . . . . .	1258	41, 1771
Electrical Properties of Thin Nickel Films at Low Temperatures . . . . .	1260	41, 1773
Isomer Shifts for the 23.8-kev Gamma Transition in Sn <sup>114</sup> . . . . .	1265	41, 1780
Y. S. Shpinel', V. A. Bryukhanov, and N. N. Delyagin . . . . .	1267	41, 1783
Determination of the Sign of the Local Magnetic Field at Gold Nuclei Dissolved in Iron and Nickel . . . . .	1270	41, 1787
Investigation of the $\pi^- + n \rightarrow \pi^- + n + m\pi^0$ Reaction in a 2.8-Bev/c Negative Pion Beam . . . . .	1275	41, 1793
Photoproduction of $\pi^0$ Mesons on Deuterium at 170 - 210 Mev . . . . .	1283	41, 1804
A. S. Belousov, S. V. Rusakov, E. I. Tamm, and L. S. Tatarinskaya . . . . .	1287	41, 1808
Observation of the Reaction $\mu^- + He^3 \rightarrow H^3 + \nu$ . . . . .	1289	41, 1811
O. A. Zaividoroga, M. M. Kulyukin, B. Pontecorvo, R. M. Sulyaev, A. I. Filippov, V. M. Tsupko-Sitnikov, and Yu. A. Shcherbakov . . . . .	1294	41, 1818
Superconducting Solenoids Using Nb <sub>3</sub> Sn for Strong Magnetic Fields . . . . .	1301	41, 1828
Investigation of the Energy Dependence of the Cross Section for Photoproduction of $\mu^+$ Mesons on Hydrogen near Threshold . . . . .	1303	41, 1839
M. I. Adamovich, E. G. Gorzhevskaya, V. G. Larionova, N. M. Panova, V. M. Popova, S. P. Kharlamov, and F. R. Yagudina . . . . .	1308	41, 1846
Neutrino Production in the Atmosphere . . . . .	1311	41, 1852
Slow Electrons in Polar Crystals . . . . .	1312	41, 1856
Covariant Derivation of the Weizsäcker-Williams Formula . . . . .	1313	41, 1860
V. N. Gribov, V. A. Kolunov, L. B. Okun', and V. M. Shekhter . . . . .	1314	41, 1864

Available From American Institute of Physics

## CONTENTS—continued

	Page	Russian Reference
<i>Zhurnal Eksperimental'noi i Teoreticheskoy Fiziki</i> Vol. XL, No. 6, 1961		
Effect of Coulomb and Nuclear Interactions on Deuteron Stripping Reactions . . . . .	1310	41, 1842
Hydrodynamics of a Nonisothermal Plasma . . . . .	1312	41, 1845
Comment on the Problem of Three Particles with Point Interactions . . . . .	1315	41, 1850
Spacing of Nuclear Energy Surfaces . . . . .	1317	41, 1852
Contribution to the Theory of Electromagnetic Fluctuations in a Non-Steady-State Plasma . . . . .	1322	41, 1859
A Possible Model of $\Lambda$ -Particle Production in High-Energy $\pi^+$ Collisions . . . . .	1328	41, 1868
Inelastic Interaction of 660-Mev Protons with Carbon Nuclei . . . . .	1330	41, 1870
Production of Pions in Weak Interactions . . . . .	1336	41, 1879
On the Theory of Quantization of Space-Time . . . . .	1340	41, 1885
Depolarization of $\mu^-$ Mesons in the Formation of $\mu$ -Mesic Atoms with Spin $1/2$ Nuclei . . . . .	1347	41, 1895
Dispersion Representation of the Deuteron Form Factor . . . . .	1355	41, 1907
Interaction Hamiltonian in Quantum Field Theory . . . . .	1361	41, 1915
Giant Resonance in $Pb^{208}$ Photodisintegration . . . . .	1371	41, 1929
Relativistic Corrections to the Magnetic Moments of $H^3$ and $He^3$ . . . . .	1374	41, 1934
Interference Effects in the Ionization of Hydrogen Atoms by Electron Impact . . . . .	1377	41, 1938
Ambiguity in the Definition of the Interpolating Field . . . . .	1379	41, 1940
On the Question of the Existence of Heavy Neutral Pseudoscalar Mesons . . . . .	1385	41, 1948
Isotopic Structure of Weak Interactions and Processes Resulting from the Absorption of a Neutrino or Antineutrino by Nucleons . . . . .	1388	41, 1953
Partial Waves with Complex Orbital Angular Momenta and the Asymptotic Behavior of the Scattering Amplitude . . . . .	1395	41, 1962
Radiation of Plasma Waves by a Charge Moving in a Magnetoactive Plasma . . . . .	1401	41, 1971
Effect of Mutual Entrainment of Electrons and Phonons on the Transverse Electrical Conductivity in a Strong Magnetic Field . . . . .	1405	41, 1978
Coupling Constants in $\mu$ Capture . . . . .	1410	41, 1988
Interaction of Gamma Quanta with Oriented Nonspherical Nuclei . . . . .	1417	41, 1998
A Possible Method of Detecting High-Energy Charged Particles . . . . .	1421	41, 2002
Photodisintegration of the Deuteron at Medium Energies . . . . .	1424	41, 2011
<b>LETTERS TO THE EDITOR</b>		
Concerning the Article "Sputtering of Copper by Hydrogen Ions at Energies up to 50 kev" by N. V. Pleshivtsev . . . . .	1431	41, 2015
Large-Angle Scattering of High-Energy Pions . . . . .	1432	41, 2016
Molecular Photodissociation as a Means of Obtaining a Medium with a Negative Absorption Coefficient . . . . .	1433	41, 2018
Author Index, vol. 41 (14)	1435	41, 2021
Subject Index, vol. 41 (14)	1446	41, 2037
Errata	1455	

Available From American Institute of Physics

## CONTENTS

<u>Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki</u> Vol. XLII, No. 1, 1962	Russian Page Reference
Analysis of 9 Bev Proton-Nucleon Interactions in Nuclear Emulsion . . . . .	1 42, 3
. . . . . E. G. Boos, V. A. Botvin, N. P. Pavlova, Zh. S. Takibaev, and I. Ya. Chasnikov	
Excitation of Hypersound in Quartz . . . . . E. M. Ganapol'skii and A. N. Chernets	8 42, 12
Experimental Study of Electron Loss by Multiply Charged Ions in Gases . . . . .	
. . . . . I. S. Dmitriev, V. S. Nikolaev, L. N. Fateeva, and Ya. A. Teplova	
Investigation of the Fermi Surface in Tin by the Method of Cyclotron Resonance . . . . .	11 42, 16
. . . . . M. S. Khailkin	
Investigation of the Fermi Surface in Lead by the Method of Cyclotron Resonance . . . . .	18 42, 27
. . . . . M. S. Khailkin and R. T. Mina	
A Method for Preparing the Superconducting Compound Nb <sub>3</sub> Sn . . . . . F. K. Lange	24 42, 35
Slowing Down of Multicharged Ions in Solids and Gases . . . . .	29 42, 42
. . . . . Ya. A. Teplova, V. S. Nikolaev, I. S. Dmitriev, and L. N. Fateeva	
Excitation Functions for the ( $\gamma$ , d) and ( $\gamma$ , p) Reactions in B <sup>10</sup> and Be <sup>9</sup> . . . . .	31 42, 44
. . . . . Yu. M. Volkov, A. V. Kulikov, and V. P. Chizhov	
The Spin-Lattice Relaxation Time of the Ti <sup>3+</sup> Ion in Corundum . . . . .	42 42, 61
. . . . . L. S. Kornienko, P. P. Pashinin, and A. M. Prokhorov	
Angular Distribution of Photoelectrons Knocked Out by Cs <sup>137</sup> Photons from Targets with	
. . . . . Different Z . . . . . A. A. Rimskii-Korsakov and V. V. Smirnov	45 42, 65
Fermi Surface of Silver . . . . . N. E. Alekseevskii and Yu. P. Gaïdukov	49 42, 69
Spin-Lattice Relaxation and Cross-Relaxation Interactions in Chromium Corundum . . .	
. . . . . A. A. Manenkov and A. M. Prokhorov	54 42, 75
Magneto-Acoustic Resonance in Aluminum . . . . .	
. . . . . P. A. Bezuglyi, A. A. Gal'kin, A. I. Pushkin, and A. I. Khomchenko	60 42, 84
'Helical' Antiferromagnetism of Gadolinium . . . . . K. P. Belov and A. V. Ped'ko	62 42, 87
Shock Adiabats and Zero Isotherms of Seven Metals at High Pressures . . . . .	
. . . . . L. V. Al'tshuler, A. A. Bakanova, and R. F. Trunin	65 42, 91
Anisotropy and Energy Distribution of Th <sup>232</sup> Fission Fragments . . . . .	
. . . . . B. D. Kuz'minov, L. S. Kutsaeva, and I. I. Bondarenko	75 42, 105
Photonuclear Reactions Involving the Emission of Deuterons and Tritons with Energies	
Below 15 Mev . . . . . Yu. M. Volkov and L. A. Kul'chitskii	77 42, 108
The Mössbauer Effect on Tungsten Isotopes . . . . .	
. . . . . O. I. Sumbacv, A. I. Smirnov, and V. S. Zykov	82 42, 115
Antiferromagnetism of Iron-Manganese Alloys . . . . . V. L. Sedov	88 42, 124
Investigation of the Polarization of Cosmic-Ray $\mu^+$ Mesons . . . . .	
. . . . . A. I. Alikhanyan, T. L. Asatiani, É. M. Matevosyan, and R. O. Sharkhatunyan	90 42, 127
An Experimental Investigation of Some Consequences of CP-Invariance in K <sub>2</sub> <sup>0</sup> -Meson	
Decays . . . . . M. Kh. Anikina, D. V. Neagu, É. O. Okonov, N. I. Petrov,	
. . . . . A. M. Rozanova, and V. A. Rusakov	93 42, 130
Electromagnetic Waves in a Medium Possessing a Continuous Energy Spectrum. III . . .	
. . . . . V. S. Mashkevich	97 42, 135
Invariant Parametrization of the Relativistic Scattering Matrix . . . . .	
. . . . . A. A. Cheshkov and Yu. M. Shirokov	103 42, 144
Deformation Field in an Isotropic Elastic Medium Containing Moving Dislocations . . .	
. . . . . A. M. Kosevich	108 42, 152
Gravitational Radiation by a Relativistic Particle . . . . .	
. . . . . V. I. Pustovoit and M. E. Gertsenshtain	116 42, 163
On the Interpretation of the Two-Center Model Within the Framework of the Hydrodynamic Theory . . . . . A. A. Emel'yanov	121 42, 171
Estimates of the Effective Interaction Radius of Particles . . . . . M. I. Shirokov	123 42, 173
Symmetry of Nuclear Fission . . . . . V. P. El'smont	127 42, 178
Nuclear Shells and Prompt Fission Neutrons . . . . . M. V. Blinov and V. P. El'smont	129 42, 180

Available From American Institute of Physics

## CONTENTS—continued

<u>Zhurnal Èksperimental'noi i Teoreticheskoi Fiziki</u> Vol. XLII, No. 1, 1962	Page	Russian Reference
On the Magnetic Properties of Paramagnetic 'Fluids' of the Molecular Chain Type . . . . .	131	42, 183
Polarization and Charge Exchange in High-Energy $\pi p$ Scattering . . . . .	137	42, 191
Analytic Continuation of the Three-Particle Unitarity Condition. Simplest Diagrams . . . . .	140	42, 196
A Possible Explanation of the Variation of the Differential Cross Section for the $(p, \alpha)$ and $(\alpha, p)$ Reactions in the Large Angle Region . . . . .	150	42, 211
Inelastic Pion-Nucleon Interactions at High Energies . . . . .	154	42, 217
V. S. Barashenkov, D. I. Blokhintsev, Wang Jung, É. K. Mikhul, Huáng Tsu-chan, and Hu Shih-k'e		
Contribution to the Theory of the $\pi + N \rightarrow N + \pi + \pi$ and $\gamma + N \rightarrow N + \pi + \pi$ Reactions Near Threshold . . . . .	159	42, 224
V. V. Anisovich, A. A. Ansel'm, and V. N. Gribov		
Shock Wave Structure in a Dense High-Temperature Plasma . . . . .	167	42, 236
Direct Nuclear Photoeffect and the Optical Model of the Nucleus . . . . .		
Yu. V. Orlov		
Finite Amplitude Waves in Magnetohydrodynamics . . . . .	175	42, 247
Z. A. Gol'dberg		
The Mössbauer Effect for an Impurity Nucleus in a Crystal. I . . . . .	179	42, 253
Yu. Kagan and Ya. A. Iosilevskii		
Neutral Baryon Currents and Single Production of Hyperons . . . . .	182	42, 259
M. A. Markov and Nguyen Van-hieu		
Relation Between the Collective and Shell Descriptions of Dipole Excitations of Atomic Nuclei . . . . .	190	42, 273
V. V. Balashov		
Inelastic Scattering of Photons in the Coulomb Field of a Nucleus . . . . .	191	42, 275
S. S. Sannikov		
Theory of Fluctuations of the Particle Distributions in a Plasma . . . . .	196	42, 282
Yu. L. Klimontovich and V. P. Sillin		
Magnetic Flux Quantization in a Superconducting Cylinder . . . . .	199	42, 286
V. L. Ginzburg		
207	42, 299	

### LETTERS TO THE EDITOR

Angular Distribution of Muons from the $\pi-\mu$ Decay . . . . .	210	42, 303
H. Hulubei, J. Ausländer, E. Friedländer, and S. Titeica		
Low-Lying Negative-Parity Levels in Nonspherical Nuclei . . . . .	211	42, 304
D. F. Zaretskii and M. G. Urin		
Phonon Scattering on Impurity Ions in Sodium-Chloride Crystals . . . . .	212	42, 307
E. D. Devyat'kova, M. I. Kornfel'd, and I. A. Smirnov		
Remarks on the Paper by Demidov, Skachkov, and Fanchonko entitled "Channel Expansion in Intense Small Sparks" . . . . .	214	42, 309
S. I. Andreev and M. P. Vanyukov		

Available From American Institute of Physics.

# Russian Journal of Physical Chemistry

October 1961

Zhurnal Fizicheskoy Khimii  
Vol XXXV, No 10, 1961.

## CONTENTS

PAGE	
(2177) 1071	Strontium pertungstates. II. I. K. PROKHOROVA and G. A. BOGDANOV
(2182) 1073	Thermodynamic functions of monatomic and diatomic gases over a wide temperature range. III. Nitrogen atoms, nitrogen molecules, and nitric oxide in the ideal state up to 20 000° K V. S. YUNGMAN, L. V. GURVICH, V. A. KVOLIDZE, E. A. PROZOROVSKII, and N. P. RTISHCHEVA
(2190) 1077	Mechanism of the electrolytic polishing of metals and the structure of the polished surface from electron-microscope data G. S. VOZDVIZHENSKIY, G. A. GORBACHUK, and G. P. DEZIDER'EV
(2199) 1084	Isotope-exchange method for measuring vapour pressures and diffusion coefficients. III. Treatment of experimental data V. I. LOZGACHEV
(2210) 1090	Some physicochemical properties of dimethylformamide B. E. GELLER
(2217) 1093	The measurement of the impedance of a copper electrode in an acid electrolyte N. P. GNUSIN
(2223) 1097	Theory of electrolysis at a plate electrode during combined concentration and chemical polarisation under convective conditions. II. L. P. KHOLPANOV
(2228) 1099	Theory of electrical transport. II. Multicomponent metallic systems D. K. BELASHCHENKO and B. S. BOKSHTEIN
(2234) 1101	Effect of the nature of silica gel and quartz surfaces on their adsorption properties. VI. Adsorption of water vapour on the surfaces of crystalline and amorphous modifications of silica M. M. EGOROV, V. F. KISELEV, and K. G. KASIL'NIKOV
(2241) 1105	The reversible bleaching of solid layers of triphenylmethane dyes in hydrazine vapour A. T. VARTANYAN
(2249) 1109	The transition of partially miscible binary mixtures through the critical region B. A. SMIRNOV
(2256) 1114	Oxidation-reduction kinetics of hydrogen, oxygen, and a stoichiometric oxygen-hydrogen mixture at a platinum electrode in electrolyte solutions K. I. HOZENTAL' and V. I. VESELOVSKIY
(2265) 1118	Nuclear magnetic resonance and the structure of aqueous electrolyte solutions K. A. VALIEV and B. M. KHABIBULLIN
(2275) 1123	Oxidation of microconcentrations of nitric oxide to nitrogen peroxide by ozone in a gas flow. II. M. T. BOROK
(2280) 1126	Structural etching in electrolytic polishing V. I. SHEVCHENKO and E. N. ALPATOV
(2285) 1128	The orthobaric heats of mixing of pyridine and water vapours N. L. YARYM-AGAEV, V. Ya. RUDIN, V. A. TITOVA, and E. A. KOGAN

THE PAGE NUMBERS  
IN BRACKETS  
REFER TO THE  
RUSSIAN ORIGINAL

Available From Cleaver-Hume Press Ltd.

CONTENTS (Contd)

Zhurnal Fizicheskoy Khimii  
Vol XXXV, No 10, 1961

- (2291) 1131 Approximate calculation of the thermodynamic characteristics of divalent-metal tungstates and molybdates  
L.A. ZHARKOVA and Ya.I. GERASIMOV
- (2297) 1134 Electrochemical reduction of ozone on various metals  
A.A. RAKOV and V.I. VESELOVSKII
- (2306) 1138 The relative reactivity of vinyl monomers towards the benzyloxy radical  
Kh.S. BAGDASAR'YAN and V.A. BOROVKOVA
- (2311) 1141 Effect of the nature of gas on the photocatalytic effect with platinum catalysts  
I.V. KRYLOVA, V.A. OGAREV, and N.I. KOBOZEV
- (2316) 1144 Heats of combustion of some bicyclanes  
M.P. KOZINA, S.M. SKURATOV, S.M. SHTEKHER, I.E. SOSNINA, and  
M.B. TUROVA-POLYAK
- (2322) 1147 Initiation by hydrogen peroxide of the emulsion oxidation of alkylaromatic hydrocarbons  
R.V. KUCHER, S.D. KAZ'MIN, and V.D. ENAL'EV
- (2328) 1149 The role of the activated transition state in chemical kinetics  
A.I. LEONOV
- (2335) 1153 Liquid-vapour equilibrium in the benzene-cyclohexane-n-propyl alcohol system  
A.G. MORACHEVSKII and CH'ENG CHING-CH'ING
- (2341) 1156 Effect of active species in combustion products on flammability limits in a turbulent flow  
S.M. KOGARKO, V.V. MIKHEEV, and V.Ya. BASEVICH
- (2348) 1160 The catalytic activity of vanadium-containing mixed oxide catalysts in the vapour-phase oxidation of organic compounds  
I.I. IOFFE, Z.I. EZHKOVA, and A.G. LYUBARSKII
- (2352) 1161 Reaction kinetics and explosion in the nitrogen dioxide-butane system  
S.K. ERMAKOVA, V.M. CHEREDNICHENKO, and S.Ya. PSHEZHETSKII
- (2358) 1165 Theory of sorption dynamics in filtration through granular materials  
V.M. SHESTAKOV
- (2363) 1167 Calculation of the joint solubility of salts  
N.S. SPIRO
- (2370) 1170 Electron-paramagnetic-resonance study of oxides of chromium  
T.V. RODE, V.B. KAZANSKII, and Yu.I. PECHERSKAYA
- (2376) 1173 Chemisorption of atoms involving conductivity electrons  
E.L. NAGAEV
- Brief Communications**
- (2383) 1176 Reaction of hydrogen and oxygen in a silent electric discharge. II. Effect of specific energy and duration of the experiment  
E.N. PITSKHELAURI, I.A. SEMIOGIN, and N.I. KOBOZEV
- (2387) 1179 Investigation of some physicochemical properties of KU-2 cation-exchange resin by infra-red spectroscopy  
N.A. SLOVOKHOTOVA, V.A. NIKASHINA, and M.M. SENYAVIN
- Letters to the Editor**
- (2389) 1181 Theory of diffusion in strong-electrolyte solutions (with allowance for ion association)  
V.A. KIR'YANOV
- (2392) 1182 Absorption spectrum of an aqueous-alcoholic solvate of the cupric ion  
I.S. POMINOV
- (2394) 1183 Fluctuations in the residence time of a randomly moving particle within a given region  
N.N. TUNITSKII
- (2396) 1184 Correction for the tunnel effect in chemical reactions  
E.A. PSHENICHINOV
- (2398) 1185 Pretransition phenomena in phase transitions  
V.K. SEMENCHENKO
- (2400) 1186 Electrolysis in aqueous solutions at high temperatures  
S.V. GORBACHEV and V.P. KONDRA'T'EV
- Book Reviews**
- (2402) 1187 "HALBLEITERPROBLEME". Volume 4. Edited by W. Schottky.
- (2403) 1188 "SEMICONDUCTORS AND PHOSPHORS". Proceedings of the International Colloquium held at Garmisch-Partenkirchen in 1960. Issued under the supervision of Professor M. Schön and Professor H. Walker.

Available From Cleaver-Hume Press Ltd.

# JOURNAL OF GENERAL CHEMISTRY OF THE USSR

Volume 31, Number 9

September, 1961

## CONTENTS

<u>Zhurnal Obshchey Khimii</u>	<u>PAGE</u>	<u>RUSS. PAGE</u>
A. M. Butlerov—An Outstanding Russian Chemist. A. E. Arbuzov .....	2611	2797
Investigation of Calcium Peroxotung States I. G. A. Bogdanov and N. A. Korotchenko.....	2621	2812
Investigation of Calcium Peroxotung States. II G. A. Bogdanov and N. A. Korotchenko.....	2626	2817
Diamagnetic Susceptibility of Internal Complexes of Molybdenum. V. V. Zelentsov....	2631	2823
Synthesis of Some Guanils of Sulfonic Acids. D. F. Kutenov, D. N. Khokhlov, and V. L. Tuzhilkina.....	2633	2825
Preparation of Substituted Acids Through the Furan Derivatives. V. Synthesis of D, L-Proline. A. P. Terent'ev, R. A. Gracheva, and L. M. Volkova...	2634	2826
Aromatic Hydrocarbons. XX. Chrysene. V. R. Skvarchenko, Lin Veen-lyan', and R. Ya. Levina.....	2636	2828
An Investigation of the Stereochemistry of Cyclic Compounds. V. F. Kucherov, I. M. Mil'shtein and I. A. Gurvich .....	2639	2832
Derivatives of Indole. XII. The Synthesis of 1-(D-β-glucopyranosyl)-Indole.		
N. N. Suvorov, and M. N. Preobrazhenskaya .....	2646	2839
The Synthesis of Thiophene Analogs of Di- and Trimethoxychalcones and Their Vinyllogs.		
V. F. Lavrushin, S. V. Tsukerman, and V. M. Nikitchenko.....	2651	2845
Heterocyclic Compounds. Synthesis of Benzoates of γ- and β-Isomers of 1-(1-Phenyl-1- Propenyl)-2,5-Dimethyl-4-Ethynyl-4-Piperidol. A. Sh. Sharifkanov and T. G. Sarbaev.....	2656	2851
Cyanine Dyes with Unsaturated Substituents. IX. Carbocyanines and Merocyanines containing Phenylacetylenyl Radicals. I. K. Ushenko .....	2659	2854
Investigations in the Field of the Chemistry of Cyanine Dyes. XVII. Synthesis of Aryl- benzothiazoles and Preparation of their Thiacarbocyanines. I. K. Ushenko .....	2666	2861
Investigations in the Field of the Chemistry of Cyanine Dyes XVIII. Condensation of Aromatic and Alicyclic Ketones with Quaternary Salts of 2-Methylbenzothiazole, and Conversion of the Resulting Compounds into Cyanine Dyes. I. K. Ushenko .....	2673	2869
Preparation of 1-Hydroxyhexadecanoic Acid by a "Crossed" Electrocondensation Method. III. Electrocondensation of Monoesters of Azelaic Acid with Acyl Derivatives of 9-Hydroxynonanoic Acid. G. E. Svadkovskaya, N. P. Solov'eva, E. K. Smol'yaninova, V. N. Belov, and S. A. Voitkevich .....	2679	2877
Fluorene Chemistry. II Friedel-Crafts Acylation of Fluorene with Maleic Anhydride.		
A. E. Kretov and V. V. Lutvinov .....	2682	2880
Asymmetric Tertiary Arsines. II. p-Tolylethylalkylarsines and their Derivatives.		
Gil'm Kamai and Yu. F. Gatilov .....	2685	2882
Study of the Reaction of Propylene Oxide with Cyanamide. II. A. E. Kretov and I. S. Matveev .....	2688	2885
Transesterification of Dialkylphosphinous Acid Esters with Glycerine Derivatives.		
K. A. Petrov., E. E. Nifant'ev and L. V. Khorkhoyanu .....	2692	2889
Conjugation Factors in Cyclic Systems. III. Some Spectral Rules for a Series of Isomeric Cyclohexadiene-1,2-dicarboxylic Acids and Their Derivatives. V. F. Kucherov, N. Ya. Grigor'eva, and T. M. Fadeeva.....	2696	2894

Available From Consultants Bureau

## CONTENTS (continued)

Zhurnal Obschchey Khimii  
Vol XXXI, No 9, 1951

RUSS.  
PAGE PAGE

Investigation in the Furan Series. XVII. Synthesis of Amino Alcohols of the 3,6-Endoxy-cyclohexane Series. Yu. K. Yur'ev, N. S. Zefirov and R. A. Osadchaya .....	2700	2898
Reactions of Aromatic Nitro Compounds XI. Investigation of the Re-Esterification Reaction by the Isotopic Method. S. S. Gitis, M. O. Tereshkevich, L. I. Garus, A. I. Glaz and O. K. Skarre .....	2704	2902
Investigations in the Field of Diacyl Peroxide. I. Synthesis and Properties of Unsymmetrical Diacyl Peroxide. Yu. A. Ol'dekop, A. N. Sevchenko, I. P. Zyat'kov, G. S. Bylina and A. P. El'nitskii .....	2706	2904
The Reduction of Naphthol Carboxylic Acids. VI. Preparation of the Methyl Ester of 2, 1-Tetralone Carboxylic Acid. L. N. Lavrishcheva, N. M. Prizhiyalgovskaya, and V. N. Belov .....	2712	2911
Synthesis and Study of Heterocyclic Derivatives with Potential Anticancer Activity. I. Some Derivatives of m-Phenanthroline. Z. V. Pushkareva and V. N. Konyukhov .....	2715	2914
The Synthesis of Substances which Contain Fragments of Folic Acid. II. The Dipeptide of the Diethyl Ester of d, 1-Glutamic Acid and $\beta$ [D-Bis ( $\beta'$ -Chloroethyl) Aminophenyl]- $\alpha$ -Alanine. L. V. Alekseeva and Z. V. Pushkareva .....	2719	2918
The Synthesis of Sodium Tetraphenylboron in a Tetrahydrofuran Medium. Kh. R. Kozlova and V. A. Pal't. ....	2723	2922
The Condensation of 1-( $\alpha$ -Furyl)-3-Methyl-1,3-Butadiene with Maleic Anhydride. A. A. Arsenyuk .....	2725	2924
The Synthesis of Asymmetric Ion Exchange Resins Based on L-Tyrosine. N. V. Kromov-Borisov and S. P. Kozhevnikov .....	2728	2926
Azomethine Dyes which Contain A Phosphonic Group. M. G. Imaev .....	2732	2930
The Synthesis of Some Mixed Trialkyl Thiophosphates and Alkylaryl Phosphites. M. G. Imaev and R. A. Fashkutdinova .....	2736	2934
Preparation of Ethyl Esters of $\beta$ -Methylene- $\alpha$ -Acylpropionic Acids and Related Compounds. V. B. Piskov .....	2739	2937
Alkylation of Arenesulamides by 2-Butanol. S. I. Burmistrova, V. I. Markov, and G. E. Krakovtseva .....	2743	2941
Double Diazonium Salts of Chlorides of Bivalent Cobalt and Copper. L. A. Kazitsyna, O. A. Reutov, and Z. F. Buchkovskii .....	2751	2943
Infrared Absorption Spectra of Double Salts of o- and m-Substituted Aryldiazonium Chlorides with Metal Chlorides. L. A. Kazitsyna, O. A. Reutov, and B. S. Kikot' .....	2751	2950
Investigations on Conjugated Systems. CXLIII. The Direction of Hydration of Alkylphenylacetylenes. B. S. Kupin and A. A. Petrov .....	2758	2958
Reactions of Chlorine-Containing Telomers of Dienic Hydrocarbons VII. Reaction of 1-Chloro-5-Methyl-, 1,3-Dichloro-5-Methyl- and 1-Chloro-3,5-Dimethyl-2, 6-Octadienes with Sodium Acetylacetone. L. I. Bunina-Krivorukova and A. A. Petrov .....	2765	2965
Investigations on Dipyrrylmethanes III. Synthesis of Meso-substituted Dipyrrylmethanes. E. I. Filippovich, R. P. Evstigneeva, and N. A. Preobrazhenskii... Studies in the Dipyrrylmethene Series. IV. Synthesis of Unsymmetrical Dipyrrylmethanes. R. P. Evstigneeva, L. I. Arkhipova, and N. A. Preobrazhenskii.... Studies in the Dipyrrylmethene Series. V. Infrared Absorption Spectra of Meso-Substituted Dipyrrylmethanes. L. D. Miroshnichenko, R. P. Evstigneeva, E. I. Filippovich, and N. A. Preobrazhenskii .....	2768	2968
	2771	2972
	2774	2975

Available From Consultants Bureau

## CONTENTS (continued)

Zhurnal Obshchey Khimii  
Vol XXXI, No 9, 1961

RUSS. PAGE  
PAGE

Synthetic Studies in the Vitamin B <sub>6</sub> Group II. Synthesis of 2-Methyl-3-Hydroxy-4-Amino-	
methyl-5-Hydroxymethylpyridine. M. V. Balyakina, E. S. Zhdanovich,	
and N. A. Preobrazhenskii.....	2781
Lipids. IX. Synthesis of Some Triglycerides of Soybean Oil. T. K. Mitrofanova,	
I. K. Sarycheva, S. P. Ivashchenko, Yu. B. Pyatnova,	
G. A. Serebrenikova, and N. A. Preobrazhenskii.....	2783
The Ultraviolet Spectra and Structure of Diphenyl Ethers. O. N. Tolkachev,	
Yu. S. Tsizin, M. A. Belousova, and N. A. Preobrazhenskii.....	2785
Concerning Color in the Series of 2-Chromonecarboxylic Acid Derivatives.	
V. G. Vinokurov, V. S. Troitskaya, and V. A. Zagorevskii .....	2790
Sulfo-Esters of Sterols and Their Transformations. A. M. Khaletskii and	
M. V. Vasil'eva.....	2794
Investigations on the Chemistry of 2,1,3-Thia- and Selenadiazole. XII. Synthesis and	
Study of Pyrimido-2, 1,3-Selenadiazole Derivatives. V. G. Pesin, A. M.	
Khaletskii, and L. V. Zolotova-Solotukhina .....	2798
Synthesis and Study of Some 5,5-Dialkylaminoalkyl Derivatives of Barbituric and	
Thiobarbituric Acids. L. S. Zonis, A. M. Khaletskii, and	
V. G. Pesin.....	2801
Synthesis of the Collagenase Substrate—Methyl Ester of Carbobenzoxy-L-Prolyl-L-	
Alanylglucyl-LProline. K. T. Poroshin, V. G. Debabov, V. A. Shibnev,	
and T. D. Kozarenko .....	2803
Tin and Lead Organic Derivatives of Nicotinic Acid. D. A. Kochkin	
and I. B. Chekmareva .....	2807
The Reaction of $\alpha$ -Hydroxyacids with Phosphorus Trichloride. E. V. Kuznetsov,	
E. B. Kamalova, R. K. Valetdinov, and A. I. Roikh.....	2809
The addition of Dialkylphosphorous Acids to 1,6-Hexamethylene Diisocyanate.	
E. V. Kuznetsov and M. I. Bakhitov.....	2811
The Effect of Catalysts and Period of Illumination on the Photo-synthesis of Amino	
Acids in a Mixture of Paraformaldehyde and Potassium Nitrate. K. Bahadur	
and R. B. Srivastava .....	2813
Dichloroperfluorodivinyl Sulfide and Sulfides with Monofluorochloro-ethyl groups.	
N. N. Yarovenko and A. S. Vasil'eva .....	2816
The Synthesis and Reactions of Methylol Amines of Unsaturated Acids. I. A. Arbuzova	
and I. K. Mosevich .....	2819
Fluoromethyl Esters of Sulfuric Acid. VI. Alkylation of Fluoro-substituted	
Dimethylsulfates. G. A. Sokol'skii and M. A. Dmitriev.....	2821
Alkylation and Arylation of Yellow Phosphorus. K. A. Petrov, V. V. Smirnov,	
and V. I. Emel'yanov.....	2823
Studies in the Naphthalene Series. XXII. Amination of Dihydroxynaphthalenes.	
V. V. Kozlov and I. K. Veselovskaya.....	2826
Studies in the Naphthalene Series. XXIII. The Oxidative Nitration of $\alpha$ -Selenocyanonaphtha-	
lene and $\alpha, \alpha'$ -Naphthalene Diselenide. V. V. Kozlov and S. E. Suvorova ..	2829
The Synthesis of Unsaturated Ketones which Contain the Furan Ring. V. F. Lavrushin,	
S. V. Tsukerman, and A. I. Artemenko .....	2832
The Mechanism of the Formation of 2-Phenyl-2-Hydroxy-1,3-Indandione from Dibromo-	
benzalphthalide. L. A. Shechukina	2835
	3030
	3034
	3037
	3041

Available From Consultants Bureau

## CONTENTS (continued)

Zhurnal Obshchey Khimii  
Vol XXXI, No 9, 1961

	RUSS. PAGE	PAGE
Stereochemical Investigations. XI. Amides of Optically Active $\alpha$ -Phenylethylamine with Substituted Benzoic Acids. V. M. Potapov, V. M. Dem'yanovich and A. P. Terent'ev.....	2839	3046
$\alpha$ -Aminophenylvinyl and p-Aminophenylvinyl Ethers. B. I. Mikhant'ev and V. B. Mikhant'ev.....	2843	3050
Preparation of Aminoalkyl Esters of Benzilic Acid. D. V. Ioffe and S. G. Kuznetsov.....	2845	3051
Synthesis of Thiazole Derivatives. XVI. New Hydroxyalkyl-2-Methylbenzthiazoles. V. M. Zubarovskii, T. M. Verbovskaya and A. I. Kiprianov .....	2849	3055
Acyl Chloride of Isocyanato Phenyl Phosphinic Acid. V. I. Shevchenko, A. S. Shtepanek and A. V. Kirsanov .....	2854	3062
Investigation of Bimolecular Alkylidenearylamines. VII. Structure of "Eibner's Base". L. P. Zalukaev and L. Ya. Spitsina .....	2858	3067
Hydrogen Bond and Solvatochromism of Some Cyanine Dyes. L. K. Mushkalo and Z. I. Shokol .....	2861	3069
Diethylenimides of $\beta$ -Aminoethylphosphinic and Thiophosphinic Acids. II. K. A. Petrov., A. I. Gavrilova, V. K. Shatunov, and V. P. Korotkova .....	2867	3076
Diethylenimides of Alkyl and Alkenylthiophosphinic and Phosphinic Acids and Some of Their Properties. I. K. A. Petrov, A. I. Gavrilova, V. K. Shatunov, and V. P. Korotkova .....	2872	3081
Transesterification of Esters of Dialkyl- and Diarylphosphinous Acids. K. A. Petrov, E. E. Nifant'ev, L. V. Khorkohoyanu, and A. I. Trushkov.....	2876	3085
On the Mechanism of Lactone Formation in the Liquid-Phase Autoxidation of Certain Polyalkylbenzenes. R. N. Volkov and S. V. Zavgorodnii.....	2880	3090
Investigation of Certain Properties of Alkylichlorosilanes in An Acetonitrile Medium. A. P. Kreshkov, V. A. Drozdov, and S. Kubiak.....	2888	3099
Synthesis of Alkyphenols by Rearrangement of Alkylphenylborates in the Presence of Ion Exchange Resins. V. K. Kuskov and A. G. Kostrykina .....	2892	3104
Synthesis and Study of Organostannoanoxanes. I. S. M. Zhivukhin, E. D. Dudikova, and V. V. Kireev.....	2895	3106
Intramolecular Conversions of N-Acyl Derivatives of $\alpha$ , $\gamma$ -Diaminobutyric Acid. A. B. Silaev, G. S. Kattrukha, and H. A. Kyz'mina .....	2900	3111
The Effect of Ionizing Radiation on Carbohydrates. I. The Problem of Formaldehyde and 1,3-Dihydroxyacetone Formation during Gamma-Ray Irradiation of Aqueous Glucose, Fructose, and Maltose Solutions. S. V. Starodubtsev, M. P. Tikhomolova, E. L. Aizenshtat, and K. Tashmukhamedova .....	2903	3115
Substituted Lactones and Their Conversions. I. Condensation of $\gamma$ -Heptylbutyrolactone with Aldehydes and Ketones. V. M. Dashunin, R. V. Maeva, and V. N. Belov .....	2906	3118
The Mechanism of the Reaction of Uric Acid with Acetic Anhydride. V. I. Khmelevskii.....	2910	3123

Available From Consultants Bureau

## CONTENTS (continued)

<u>Zhurnal Obozrshchey Khimii</u> Vol XXXI, No 9, 1961	RUSS. PAGE	PAGE
Synthesis in the Phenothiazine Series. VI. Amines of the Phenothiazine Series. S. V. Zhuravlev and V. A. Skorodumov .....	2915	3129
Radical Reactions of Percarbonates. II. Decomposition of Dicyclohexylperoxydicarbonate in Benzene and Acetic Acid in the Presence of Metals and Metal Salts. L. M. Terman and G. A. Razuvayev.....	2918	3132
The Absorption Spectra of Certain Thiopyridones in Pyridyl Sulfides. V. S. Korobkov, A. V. Voropaeva, and I. Kh. Feldman .....	2922	3136
<b>LETTERS TO THE EDITOR</b>		
A New Type of Condensation of 2-Hydroxy-2,5-Dihydrofuranes. V. I. Serkova, A. A. Antonova, and E. D. Venus-Danilova.....	2926	3141
Reaction between the Oxide of Erucic Acid Methyl Ester and Acetic Acid. I. L. Kuranova, Yu. D. Shenin, and G. V. Pigulevskii.....	2928	3142
Determination of the Structure of Abienol. G. V. Pigulevskii, V. G. Kostenko, and L. D. Kostenko .....	2929	3143
Addition of Compounds of Trivalent Phosphorus Containing a P-Cl Bond to Diene Hydro- carbons. N. A. Razumova and A. A. Petrov .....	2930	3144

Available From Consultants Bureau

JOURNAL OF APPLIED CHEMISTRY OF THE USSR

Zhurnal Prikladnoy Khimii

Volume 34, Number 11

November, 1961

CONTENTS

	RUSS. PAGE	PAGE
The Role of Applied Chemistry in the Future Industrial Growth of the USSR .....	2245	2365
The Salt Deposits of Ketmen'-Tyube and Prospects for Their Utilization.		
I. G. Druzhinin and I. E. Batyrchaev .....	2249	2370
Synthesis and Purification of Boron Bromide and Iodide. B. N. Ivanov-Émin,		
L. A. Nisel'son, and I. V. Petrushevich .....	2256	2378
Crystallization of Calcium Sulfate During the Interaction of Monocalcium Phosphate		
with Sulfuric Acid in Phosphoric Acid Solution. M. E. Pozin, B. A.		
Kopylev, V. L. Varshavskii, and I. Pinter .....	2261	2384
Selective Chlorination of Chromium Ore. I. A. Magidson, G. V. Karsanov,		
T. V. Kalmykova, and M. I. Gerasimova .....	2266	2391
Sublimation and Collection of Selenium and Arsenic During Sulfating of Metallurgical		
Dusts. L. S. Getskin and V. P. Savraev .....	2274	2398
Extraction of Uranium from Waste Waters of Chemical Plants and Scientific Research		
Laboratories. L. D. Skrylev and S. G. Mokrushin .....	2278	2403
The Role of Sodium Ferrite in the Leaching of Aluminate Sinters.		
M. F. Malyshev and G. V. Kazabrodskaya .....	2282	2407
Interaction of Strontium and Lead Glazes with Earthenware Body.		
Yu. G. Shtenberg and K. K. Evstrop'ev .....	2287	2413
Use of Complex-Formation Chromatography for Concentration of Microquantities		
of Lead and Other Metals from Solutions. P. F. Andreev, L. T. Danilov,		
and G. O. Keshishyan .....	2292	2419
Sorption of Molybdenum by Activated Carbons and Anion-Exchange Resins.		
I. A. Kuzin, T. G. Plachenov, and V. P. Taushkanov .....	2298	2426
Use of Polyelectrolytes for Extraction of Gold from Waste Waters. J. Kutil,		
F. Juracka, and J. Simek .....	2302	2430
Thermodynamic Properties of Liquid Metallic Solutions in the Systems Na-Ga and		
K-Ga. M. F. Lantratov and E. V. Tsarenko .....	2306	2435
Liquid-Vapor Equilibria in Binary and Ternary Systems Formed from C <sub>6</sub> Hydrocarbons		
and Dimethylformamide. S. K. Ogorodnikov, V. B. Kogan, and		
M. S. Nemtsov .....	2311	2441
Electrical Conductivity of the Selenium-Arsenic System in the Glassy State.		
L. A. Baidakov, Z. U. Borisova, and R. L. Myuller .....	2316	2446
Investigation of the Use of Carbonated Calcium Metasilicate in the Production of Dry		
Galvanic Cells. M. G. Manvelyan, N. M. Grigoryan, L. F.		
Pen'kova, G. O. Grigoryan, and E. G. Apirina .....	2324	2455
Inhibitors of the Corrosion of Carbon Steel in Carbon Tetrachloride.		
V. M. Chistyakov and S. A. Balezin .....	2329	2460
Effect of Heat Treatment on the Corrosion Resistance of Titanium Alloy Type VTZ-1 in		
Sulfuric Acid Solutions. I. S. Anisov and B. D. Kukalenko .....	2335	2466

Available From Consultants Bureau

## CONTENTS (continued)

Zhurnal Prikladnoy Khimii  
Vol XXXIV, No 11, 1961

	RUSS. PAGE	PAGE
Corrosion Behavior of Zirconium in Distilled Water at 85°. V. V. Gerasimov, A. I. Gromova, and E. T. Shapovalov.....	2341	2473
Anodic Critical Current Densities in NaCl, KCl, NaCl-CaCl <sub>2</sub> and NaCl-BaCl <sub>2</sub> -CaCl <sub>2</sub> , S. A. Zaretskii, V. B. Busse-Machukas, and A. A. Karakhanov ...	2346	2478
Investigation of the Anode Process on Graphite in the Electrolysis of Sodium Chloride in Presence of Sulfate Ions. M. M. Flisskii, I. E. Veselovskaya, R. V. Dzhagatspanyan, and O. V. Chernyavskaya .....	2351	2483
Electrochemical Investigation of the Passivation of Zirconium in Acid Solutions. A. Ya. Shatalov and T. P. Bondareva .....	2355	2487
Reaction Kinetics of the Alkaline Process for Production of Hexachloran (Hexachlorocyclo- hexane). F. F. Krivonos .....	2362	2496
Effect of Hydrogenation on the Properties of Polybutadienes. A. I. Yakubchik, V. N. Reikh, B. I. Tikhomirov, and A. V. Pavlikova .....	2368	2501
Investigation of the Packing Density of Certain Native Holocelluloses. V. I. Sharkov, V. P. Levanova, and I. S. Artem'eva .....	2374	2508
Electron Microscope Studies of the Fine Structure of Viscose Fibers. E. A. Abramova, B. S. Tuchkov, and E. B. Fedorova .....	2381	2516
Investigation of the Hydraulic-Main and Condenser Fractions of Chamber Shale Tar Intended for Wood Preservation. G. B. Shaltyko .....	2389	2525
Resin Distribution in the Sulfite Pulp Cooking Process. S. S. Malevskaia, Yu. F. Lyamtsseva, and D. Y. Lyamtshev .....	2396	2533
Effects of Phenols and Amines on Sediment Formation in Fuels Containing Cracking Components. V. N. Zrelov and V. M. Melekhin .....	2400	2537
Study of the Dehydrogenation of Alcohols over a Copper-Calcium Catalyst. I. B. Rapoport, V. M. Gol'dberg, and L. B. Itsikson .....	2407	2544
Preparation of the Fungicide Captan. N. N. Mel'nikov, E. M. Sckolova, P. P. Tjunov, and G. I. Brusenina .....	2412	2550
<b>BRIEF COMMUNICATIONS</b>		
Investigation of the Hydrolysis of Carnallite During Preliminary Dehydration. E. I. Savinkova, T. F. Sukhova, T. A. Degtyareva, and A. I. Orekhova .....	2417	2555
Effect of Calcination on the Ion-Exchange Capacity of Vermiculite. V. F. Bagretsov, V. V. Pushkarev, A. R. Beketov, and V. M. Nikolaev .....	2420	2558
Magnetochemical Investigations of Glasses in the System Na <sub>2</sub> O-P <sub>2</sub> O <sub>5</sub> -V <sub>2</sub> O <sub>5</sub> . K. P. Azarov, V. V. Balandina, and V. A. Lyutseydarskii .....	2422	2560
Separation of Chlorine Isotopes by the Chemical Exchange Method. K. I. Matveev, O. V. Uvarov, and N. M. Zhavoronkov .....	2425	2563
Nature and Properties of the Surface Film Formed on Titanium During Pickling in Acids. S. M. Burdina and A. G. Samartsev .....	2428	2566
Certain Physicochemical Properties of Rhenium Carbonyl. A. A. Ginsburg .....	2431	2569
Thermodynamic Properties of Salt Melts in the System CdBr <sub>3</sub> -NaBr. M. F. Lantratov and T. N. Shevlyakova .....	2433	2570
Absorption of Sound of Final Amplitude in a Coagulating Aerosol. B. F. Podoshevnikov and B. D. Tartakovskii .....	2437	2573
The Compound Formed at the Anode During Electrolysis of Alkaline Vanadate Solutions. A. S. Goncharenko .....	2439	2575
Equilibrium Vapor and Liquid Phase Compositions of Binary Solutions of Phosgene in Chlorobenzene and in 1, 2, 4-Trichlorobenzene. N. A. Gol'berg and V. A. Gorbushenkov .....	2441	2577

Available From Consultants Bureau

- 358 -

## CONTENTS (continued)

Zhurnal Prikladnoy Khimii Vol XXXIV, No 11, 1961	PAGE	RUSS. PAGE
Fractionation of Cellulose. L. S. Bolotnikova, S. N. Danilov, and T. I. Samsonova .....	2443	2578
Bonding of Polyethylene to Metals and Rubber. A. I. Yakubchik, S. Ya. Grilikhes, B. I. Tikhomirov, and V. S. Purlova .....	2445	2579
Effect of Thiourea on Leveling During Nickel Plating. A. A. Voronko and V. A. Kaikaris .....	2447	2582
Mechanism of the Initiating Action of Potassium Naphthenate in Oxidation of Paraffinic Hydrocarbons. V. K. Tsyskovskii, B. G. Freidin, and E. K. Prokof'ev.	2451	2586
LETTERS TO THE EDITOR .....	2454	2588

Available From Consultants Bureau

# Soviet Physics TECHNICAL PHYSICS

*A Translation of the "Zurnal Tekhnicheskoi Fiziki"*

(Russian Original Vol. 31, No. 12, pp. 1409-1494, December, 1961)

Vol. 6, No. 12, pp. 1029-1112

June, 1962

## CONTENTS

	RUSS. PAGE	PAGE
Organization of Scientific Research—on the Level of the New Problems . . . . .	1029	I
Certain Questions in the Unsteady Flow of a Conducting Fluid through a Tube of Constant Cross Section in a Transverse Magnetic Field. Ya. S. Uflyand . . . . .	1031	1409
The Instability of the Positive Column in Short Discharge Tubes in Longitudinal Magnetic Fields. A. V. Timofeev . . . . .	1039	1420
Accelerating System Using TE-Modes. L. I. Bolotin, V. A. Bomko, E. I. Revutskii, and I. S. Sidorenko . . . . .	1043	1426
Role of the Emission Channel in an Ion Source. S. N. Popov . . . . .	1047	1431
Achromatic Quadrupole Electron Lenses. V. M. Kel'man and S. Ya. Yavor . . . . .	1052	1439
The Electrostatic Focusing of Intense Beams of Charged Particles in Cylindrical-Cathode Systems . V. P. Ignatenko . . . . .	1055	1443
A Comparison of Ionization and Calorimetric Measurements of Synchrotron Bremsstrahlung Energy Flux. II. S. P. Kruglov . . . . .	1060	1451
An Experiment in the Direct Conversion of the Energy of an Electromagnetic Field into Mechanical Energy. R. A. Vallitov, V. D. Kurush, and V. G. Orlov . . . . .	1068	1462
The Influence of Gasdynamic Relaxation of CO <sub>2</sub> on the Coefficient of Resistance of a Sphere for Supersonic Velocities. G. I. Mishin and V. A. Ovsyannikov . . . . .	1071	1467
Fine Structure and Hyperfine Structure of Paramagnetic Resonance Rotation. F. S. Imamutdinov . . . . .	1075	1472
Local Redistribution of the Total Energy in the Boundary Layer of a Compressible Gas at the Surface of a Burning Body. L. A. Vulis and V. P. Kashkarov . . . . .	1079	1477
The Solution of the "Key" Problem of Diffraction on an Ideally Conducting Strip. V. N. Kuritsyn . . . . .	1085	1485
On the Attainment of Oscillatory Equilibrium behind a Shock Wave. S. I. Anisimov . . . . .	1089	1491
INDEXES TO VOLUME 6		
Author Index . . . . .	1093	
Subject Index . . . . .	1101	

Available From American Institute of Physics

# Soviet Physics

# TECHNICAL PHYSICS

*A Translation of the "Zhurnal Tekhnicheskoi Fiziki"*

(Russian Original Vol. 32, No. 1, pp. 1-132, January, 1962)

Vol. 7, No. 1, pp. 1-92

July, 1962

## CONTENTS

	RUSS. PAGE	PAGE
On Certain Methods for Formulating Fields that Have Focusing Properties. <u>Ya. L. Geronimus</u> . . . . .	1	3
Steady-State Laminar Flow of an Electrically Conducting Fluid in a Rectangular Tube under the Action of Ponderomotive Forces. <u>A. G. Ryabinin</u> and <u>A. I. Khozhainov</u> . . . . .	9	15
Motion of Charged Particles in a Uniform Magnetic Field that Increases Linearly with Time. <u>V. A. Ankudinov</u> , <u>V. M. Kel'man</u> , <u>O. M. Kresin</u> , and <u>L. N. Sysoeva</u> . . . . .	14	22
Reflection of Electromagnetic Waves from Moving Surfaces. <u>A. M. Kovalev</u> and <u>V. N. Krasil'nikov</u> . . . . .	19	30
Stability of a Heavy Conducting Fluid Contained by a Rapidly Varying Magnetic Field. <u>T. F. Volkov</u> . . . . .	22	34
Excitation of Magnetohydrodynamic Waves in an Anisotropic Plasma. <u>A. D. Pataraya</u> and <u>D. G. Lominadze</u> . . . . .	28	44
Propagation of a UHF Discharge Along the Axis of a Coaxial Line with a Gas-Discharge Inner Conductor. <u>M. Ya. Mandel'shtam</u> . . . . .	31	48
Growth of the Spark Discharge Canal for a Discharge Circuit with a Rapidly Increasing Current. <u>S. I. Andreev</u> , <u>M. P. Vanykov</u> , and <u>A. B. Kotolov</u> . . . . .	37	57
Production of Convergent Ribbon Beams of Charged Particles with High Current Densities. <u>V. P. Ignatenko</u> . . . . .	41	63
The Excitation of Molecular Rotations Beyond a Shock Wave. <u>N. V. Krivtsova</u> and <u>Yu. P. Lun'kin</u> . . . . .	45	69
Investigation of the Arc Excitation Process in a Chamber in which Air Blowing is Present. <u>N. Z. Aronson</u> . . . . .	50	76
On the Connection between the Thermal-Diffusion Coefficient and the Thermodynamic Properties of Binary Mixtures. I. Calculation of the Thermal-Diffusion Coefficient for Dense Gases. <u>L. S. Korousov</u> . . . . .	58	89
The Load-Deformation of Ice. <u>V. V. Lavrov</u> . . . . .	66	101
The Melting of a Centrally Symmetric Body by Heat Flow with the Removal of the Liquid Phase. <u>A. S. Pleshakov</u> . . . . .	70	106
Simulation Device with Vibrating Charged Probe for Investigation of Two-Dimensional Fields. <u>G. M. Gershtein</u> and <u>G. K. Fedonin</u> . . . . .	74	112
The Resonator Variant of the Helical Waveguide Method for Measuring the Permittivity of a Substance at Ultra-High Frequencies. <u>K. P. Yatsuk</u> and <u>V. P. Shetopalov</u> . . . . .	79	119
<b>BRIEF COMMUNICATIONS</b>		
Experimental Investigation of Diffusion Decay of a Plasma in a Magnetic Field. II. <u>V. F. Golant</u> and <u>A. P. Zhulin斯基</u> . . . . .	84	127
Calculating the Electrical Conductivity of Alkali Metal and Copper Vapors. <u>V. P. Ignatenko</u>	86	129

Available From American Institute of Physics

AUTHOR INDEX

- A -			
Abdrashitov, P. M.	122	Andryanov, K. A.	94
Abe, T.	85	Anghileri, L. J.	85
Abov, Yu. G.	207	Anokhin, P. K.	171
Abresch, K.	189	Antonov, N.	110
Abroyan, I. A.	215	Antonov, Yu. N.	128
Acloque, P.	224	Anzai, Kuraji	67
Aczel, J.	163	Arbuzov, M. P.	184
Adam, H.	143	Aref'yeva, Z. S.	206
Adam, J.	144	Arifov, U. A.	221
Adamiczka, Jerzy	37	Arkhipov, A. S.	168
Adda, Y.	187, 188	Arnol'di, I. A.	164
Agafonova, F. A.	149	Artobolevskiy, I. I.	239
Ageikin, D. I.	95	Arvieri, W.	83
Audit, D. N.	68	Ashmarin, A. B.	170
Ailincai, G.	146	Asinovskiy, E. I.	211
Aim, F.	85	Atansiu, N.	85
Akhachinskiy, V. V.	204	Atoyan, K. M.	19
Akita, Y.	147	Atrazhev, M. P.	132
Aksanova, O. N.	165	Aver'yanov, K.	5
Aksilenko, V.	220	Avrunina, G. A.	167
Albrecht, Jerzy	33	Ayukhanov, A. Kh.	221
Aleksandrov, A.	198	Ayzenberg, I.	10
Aleksandrov, A. P.	199	- B -	
Aleksandrov, A. Ya.	121	Babich, R. K.	184
Aleksandrov, K. J.	128	Babicheva, Ye. V.	112
Alekseyenko, V. I.	221	Babkov	160
Alekseyev, G. V.	217	Babskiy, Ye. B.	168
Alekseyeva, V. N.	167	Bachler, W.	144
Aleksic, M.	27	Bagrov, N. A.	156
Alester, I.	180	Bailo, Puerto	182
Alexander, K. F.	200	Bajza, L.	125
Alferov, S. M.	76	Balakhovskiy, I. S.	166
Alikhanov, A. I.	92	Balakin, N.	235
Aliyev, F.	3	Balakin, N. G.	77
Almasy, Andor	106	Balazzovics, G.	194
Alperovich, I. A.	216	Baluin, S. A.	197
Alt'man, A. B.	16	Bangert, L.	230
Alt'shuler, S. A.	111	Bannikov, S. P.	19
Ambartsumyan, V. A.	23	Banny, Nikolay Pavlovich	1
Ancona, F.	83	Barabashev, M. P.	78
Andreyev, V. I.	132	Baranov, I. A.	184
Andronikashvili, E.	240	Baranov, V.	155

Baranov, V. G.	171	Berezov, V.	8
Barbashin, M.	10	Berg, A.	239
Barbashin, Ye. A.	163	Berge, Ph.	133
Barbier, D.	161	Berger, A.	84
Bargone, A.	194	Berlage, H.	162
Baroni, E. E.	197	Bernaerts, M. J.	96
Bartak, Imre	31	Berry, J. L.	149
Bartal, Dezso	145	Beschinskiy, A.	110
Bartel, A.	143	Beskov, S. D.	95
Bartmann	29	Bessonov, S. V.	89
Basevich, V. Ya.	87, 202	Betev, B.	111
Bashkatov, T.	5	Bettzieche, P.	189
Basov, N. G.	114	Beyeler, M.	187, 188
Bastien, P.	98	Bialecki, Klemens	34
Batanov, G. M.	215	Bianchi, Guido	181
Baud, R. V.	230	Bielen, R.	97
Bauer, E.	98	Bierstadt, R.	28
Bauer, H.	99	Bilay, V. I.	164
Bauer, K. H.	134	Birman, I.	6
Baumel, A.	100	Blagovidova, Yu. A.	165
Bayh, W.	230	Blanchet, M.	82
Baz', A. I.	198	Blanchet, R.	225
Bechlenberg, H.	143	Blaton, J.	229
Becker, D.	102	Blauth, E.	230
Becker, W.	137	Blin, J.	224
Behrisch, R.	230	Blinov, V. I.	89
Beiser, M.	84	Blokh, N. P.	7
Bel, A.	200	Blokhin, N. N.	24
Belay, Joseph	31	Blokhintsev, D. I.	218
Belima, O. S.	124	Bloksma, A. H.	102
Belkin, V. F.	207	Blum, Alexander	91
Bel'kind, V. T.	132	Blume, Jean	49
Belleville, Pierre	50	Bobritskaya, M. A.	80
Belobrov, I.	4	Bocchi, O.	106
Belousov, R.	17	Boersch, H.	232
Belousova, A. Z.	164	Boettcher, F.	104
Belousov, V. V.	150	Bogatykh, S. A.	15
Belov, A. V.	125	Bogomolov, A. M.	115
Belozerov, A.	5	Boiga, G.	139
Belozerskiy, A. L.	94	Boldyryev, V. L.	157
Belyakov, A.	17	Bondaletov, I.	11
Belyayev, Ya. I.	155	Bondarev, I. I.	110
Bena, J.	96	Bonta, Janos	233
Bennaure, E.	135	Boon, E. F.	139
Benteler, H.	193	Boos, H.	137
Benua, Ye. Yu.	114	Borawski, Kazimierz	43
Berceli, Tibor	145	Borbely, Bela	32

Boriskin, V. V.	79	Bussetti, G.	106
Borisov, A. V.	156	Butt, Yu. M.	88, 218
Borisov, M.	197	Bykov, L. M.	124
Borisov, V. V.	151	Bystrevskiy, L. M.	15
Bornschein, G.	141	Byszewski, Inzynier Waclaw	36
Borodachev, I. P.	3		
Borovitskiy, B.	5		
Boswirth, L.	228	- C -	
Bota, M.	40	Cagnet, M.	188
Boudan, J.	98	Calati, A.	181
Boyarskiy, A.	17	Cardano, R.	146
Boykov, G. P.	213	Carriere, Pierre	77
Braams, R.	223	Carrillio, Santiago	73
Brandestini, A.	140	Cervenka, J.	43
Brass, Heinz	30	Chabowski, M.	77
Brauer, G.	90, 102	Chaffard, Georges	55, 56
Brauns, E.	104	Chan, Mu-tung	160
Bredel, V.	200	Chang, Hsiao-ch'ien	174
Broder, D. L.	79	Chang, I-p'ing	59
Broderzon, B. M.	173	Chang, Jen-an	17
Brodskiy, Viktor Borisovich	1	Ch'ang, Tsung-hui	81
Bromirski, J.	148	Chapelite, J.	188
Bronikowski, Adam	36	Charkviani, O. A.	120
Brossa, F.	194	Chavchanidze, V. V.	151
Brovchenko, V. G.	112	Checha, V. A.	213
Bruckner, R.	229	Chechetkin, A. V.	210
Brumpt, E.	82	Ch'en, Yuan	66
Bruyevich, N. G.	239	Ch'en, Yu-ch'ing	174
Bruykker, L. E.	121	Ch'en, Yu-wei	66
Bubanj, Viktor	236	Ch'eng, Li-chia	178
Buchel, E.	189	Cherdynsev, V. V.	198
Buck, J.	119	Cherkasov, A. S.	94
Budnikov, P. P.	94, 208	Chernoshchekov, L. I.	206
Budnyatskiy, I. M.	128	Chernov, L. A.	222
Buffet, J.	97, 199	Chernov, N. N.	149
Bugard, Pierre	242	Chernyavskiy, Ye. A.	220
Buhl, R.	230, 232	Chernyi, G. G.	212
Bui, Cong Trung	66	Chernysh, O. F.	123
Bulanin, V. I.	129	Chesne, A.	224
Bulanov, A. I.	151	Chesnokov, B. B.	215
Bulavkin, A. A.	131	Chevassus, F.	225
Bulyayev, A. P.	185	Chia, K'e-ming	175
Bungardt, K.	141, 142	Chichinadze, V. K.	120
	191	Ch'ien, Mu-han	175
Burck, W.	103	Chigray, V.	169
		Chistov, N.	19

Chistov, N. M.	18	Dekhovich, D. A.	132
Chizhikova, Z. A.	201	Dekhtyar, I. Ya.	220
Choporov, Ya. P.	91	Dekhtyarenko, P. I.	123
Christensen, Kjell	52	Delmas, R.	200
Chu, Chi-ming	175	Delphy, L. P.	178
Chubarova, S. I.	111	Demin, V. G.	235
Chun, H.	226	Demirkhanov, R. A.	202
Chung, Hui-lan	175	Demokidov, K. K.	22
Chung, Kuo-hao	66	Denisenko, P. P.	171
Chung, Shih-hsing	69	Denisov, Yu. N.	205
Chzhou, Li-san'	65	Dennstedt, M.	101
Claret, J.	225	Determann, H.	105
Clej, O.	40	Devernay, M.	134
Clerc, A.	188	Deynego, Yu. B.	15
Cochetto, Achille	52	Dhar, N. R.	103
Comes, F. J.	233	Diamandopol, M.	39
Condominas, Georges	70	Didenko, N. S.	209
Conrads, H.	143	Dietrichs	84
Constant, A.	188	Dietzsch, W.	228
Corciovei, A.	225	Dillenburger, W.	227
Cornet, C.	97	Djubek, J.	136
Cosneanu, C.	108	Dobrushin, R. L.	217
Courtieu, Paul	50	Dobushin, R. L.	112
Csath, Bela	145	Doerschel, Wolfgang	29
Cusmano	182	Dolyakov, V.	17
Czachorski, Waclaw	37	Domalski, H. H.	99
Czarnowski, Stefan	36	Donhoffer, S.	182
Czjzek, C.	193	Dorfman, L. A.	125, 126
- D -			
Dabkowski, Henryk	35	Dornheim, G.	102
Dahl, J.	136	Dorodnitsyn, A. A.	234
D'albon, G.	146	Dorokhov, A. P.	15
Dam, Trung Don	66	Draganic, Ivan	234
Damdindorj, G.	64	Dresden	117
Danilin, A. S.	204	Drobshev, F. V.	156
Danilov, P. M.	184	Drozdov, N. G.	125
Dankiewicz, Jerzy	37	Drutia, Traian	39
Darras, R.	149	Druzhinin, V. P.	185
Dasoyan, M. A.	186	Dryakhlov, A. I.	123
Davydov, V. D.	235	Dubchak, V.	17
de Beaulieu, Ch	188	Dubenskiy, A. A.	113
Degommier, J.	179	Dubinskaya, I. D.	23
de Hedouville, J.	134	Dubouet, M.	47
Deich, M. E.	130	Dudorov, V. V.	215
de Keyser, W. L.	187	Dudurov, N.	6
		Dubyago, D. I.	154
		Dubouet, M.	134
		Dugersuren, Ts.	68

Dujanovic, Petar	45
Duker, H.	232
Dukhenko, M. T.	208
Dumic, B.	45
Dunin, M. S.	81
Duong, Hong-mo	82
Dupuis, B.	134
Dutheil, H.	178
Dutsesku, N.	196
Dvoretskiy, A.	197
Dvoretskiy, V. M.	122
Dvoskin, B.	10
Dyankov, Dimitur	26
Dykhenko, L. M.	132
Dymczak, Miroslav	36
Dyuzhev, I. F.	7
Dzhakov, E.	112

- E -

Ebel, H.	189
Edilashvili, V. Ya.	13
Efimenko, G. G.	127
Egerland, Helmut	30
Egiazarov, G. M.	81
Ehret, G.	228
Eisenberg, A.	138
Emel'yanov, V. S.	183
Emme, A.	235
Enault, Y.	116
Engelmann, H.	104
Enghuber, W.	190
Erdey-Gruz, Tibor	32
Erno, Nagy	236
Euler, J.	227
Evanzin, Rudolf	37
Evstyukhin, A. I.	183
Evtyshev, D. P.	185
Ewald, Heinz	226
Exner, F.	104

- F -

Fabritius, H.	189
Faix, Zdenek	133
Fal'kevich, A. S.	121
Fang, Ch'i	175
Fang, Hsien-chih	176
Fat'yanov, A. D.	125
Fayn, V. S.	216
Fazekas, Bela	32
Fedan, R. M.	123
Fedorenko, V. N.	80
Fedorov, Al. A.	3
Fedorov, G. B.	183
Fedorov, Ye. K.	238
Feichtinger, H.	191
Fel'dbaum, O. A.	124
Felix, E.	231
Feltz, A.	105
Feng, Hua-te	57
Feng, Lan-chou	174, 175
Feng, Lan-hsiang	174
Feoktistov, F.	14
Ferner, V.	142
Ferro, A.	194
Fershtut, N. S.	130
Fetz, H.	227
Fichtl, W.	191
Filippova, G. P.	210
Finkbein, U.	117
Finogenov, S. N.	220
Fischer, Hans	101
Fishkova, L. M.	207
Fitterman, B.	18
Fleysher, Ye.	14
Fleyshman, B. S.	114
Florke, O.	229
Fock, W.	109
Foldiak, G.	117
Folgalvez, Pierre	49
Fomin, A. A.	88
Forgach, Zoltan	31
Forster, E.	100
Foteyev, A. M.	77
Francais, J.	134
Francon, M.	223
Frank, D.	232
Franz, J.	85

Frost, V. A.	218
Fruhauf, M.	103
Fuhs, G. Wolfgang	100
Fukushima, Yutaka	63
Funihisa, Tashiro	67
Funshtein, L. V.	164
Furduieșcu, Gabriel	38
Fust, V.	161

- G -

Gaede, W.	226
Gagajek, Cz.	44
Gakkel, Ya. Ya.	157
Gal, Olga	234
Gamov, N.	13
Gandon, Yves	72
Gan'shin, V. G.	150
Garaudy, Roger	73
Garina, M. G.	170
Gastfer, M. P.	238
Gatanova, A. A.	16
Gavrilov, A. N.	121
Gdulewski, Ryszard	36
Geller, S. Yu.	157
Georgescu, I.	39
Gerasimov, I. M.	150
Gerasimov, V. V.	86
Gerenburg, L. A.	160
Gerts, Yelena Vasil'yevna	204
Gheorghiu-Dej, Gheorghe	38
Giesberg, H.	47
Gimmel'farb, A. A.	127
Gingerich, K. A.	90
Ginsburg, V. A.	88
Girard, O.	178
Gitgartz, M. I.	184
Gizhitskiy, A.	152
Gladysheva, A. A.	165
Glants, G.	196
Glanz, G.	226
Glazov, A. N.	9
Glazov, N. V.	203
Glezer, V. D.	167
Glotov, N. P.	173
Glushkov, I.	129
Glushkov, I. L.	77
Gogachov, A. N.	96
Gokhberg, B. M.	207
Golbetzand, S. B.	130
Gol'danskiy, V. I.	198
Gol'denberg, S. A.	206
Goldfarb, M. I.	91
Golovan, A. T.	113
Golubev, A.	160
Golubev, A. A.	168
Gonchar, V. N.	185
Gonzales, Jose	73
Gorard, O.	82
Gorbov, F. D.	173
Gordeyeva, L. D.	202
Gordov, G. B.	80
Gor'kov, N.	17
Gorlov, G. V.	112
Gorshkov, A.	11
Gorshkov, F.	4
Gorshkov, P. M.	157
Goryunov, A. A.	219
Gorzel, W.	28
Govorova, L. A.	159
Gradski, Waclaw	148
Granitov, A.	23
Grecu, D.	225
Greiner, Heinz	101
Grevennikov, N. I.	122
Grigorescu, C.	40
Grigoryan, M.	5
Grigoryan, V. A.	184
Grimm, R.	100
Gritchenko, Z. G.	152
Grobman, D. M.	163
Gromova, A. N.	86
Grum-Grzhimailo, S. V.	93
Grunder, W.	190
Gruner, P.	137
Guarnieri, B.	146
Gubarev, A. V.	130
Gubkin, S. I.	202
Guibe, Jean	179
Guillemet, C.	224
Gupalo, Y. P.	210
Gurevich, M. A.	149
Gureyev, N.	12

Gurovskiy, N. 235  
 Gurshteyn, A. A. 236  
 Guseynov, D. Ya. 165  
 Gustavsen, Finn 53  
 Gydnia, Jerzy 37  
 Gyorgy, Tallos 31

- H -

Haas, H. 140, 229  
 Haber, J. 100  
 Hache, A. 97  
 Hader, F. 137  
 Haffner, Friedrich 145  
 Hafner, Erich 117  
 Hagberg, Hilding 49, 53  
 Hahn, Harry 105  
 Halbronn, G. 161  
 Hamisch, H. 232  
 Hammer, R. 142  
 Hanhart, Ernst 180  
 Hars, E. 178  
 Hashimoto, Fumio 108  
 Haubewaller, Alexander 145  
 Hauk, U. 231  
 Haun, S. 200  
 Hauser, R. 97  
 Hawrylak, Henryk 35  
 Haxel, O. 200  
 He, Tz'u-ch'iang 65  
 Heese, A. 47  
 Heller, K. F. 37  
 Hencks, A. 193  
 Henke, G. 192  
 Hennemann, K. 230  
 Herzog, E. 97  
 Hidemi, Kon 63  
 Hiro, K. 107  
 Hillermanns,  
    Hans-Guenther 181  
 Hintonberger, Heinrich 226  
 Hirling, J. 200  
 Hirose, G. 144  
 Hirschberg, Il. 139  
 Ho, Cheng 57  
 Ho, Ch'i 174  
 Ho, Chien-chang 57

Ho, K'ai-tseng 175  
 Hoang, A. Orkin-Lecourtois 225  
 Hoang, T. F. 233  
 Hodousek, V. 116  
 Hoffmann, Klaus Werner 200  
 Hoffmann, A. 106  
 Hoffmann, M. 105  
 Hofmann, W. 242  
 Hokkyo, Noboru 234  
 Holle, J. 117  
 Hsin, Ju 70  
 Hsu, Ti-hsin 62  
 Huang, Chia-ssu 176  
 Huang, Tsai-yao 57  
 Huber, G. 30  
 Huebener, H. I. 180  
 Iulkki, R. T. 228  
 Hummel, C. 231  
 Hummel, D. 230  
 Hunog, Moc 70  
 Huttig, J. 190  
 Hyongsik, Yun 67

- I -

Iaccarino, G. 187  
 Ibragimov, M. Kh. 217  
 Ichikawa, Michio 107  
 Igityan, M. 8  
 Ignatenko, V. P. 222  
 Ignat'yev, K. G. 112  
 Ignat'yev, V. F. 89  
 Ikonov, M. N. 126  
 Ikebe, K. 107  
 Ikolovich, V. N. 201  
 Ilse 63  
 Imota, S. 103  
 Indik, N. 24  
 Inosov, V. L. 207  
 Irkayeva, K. M. 219  
 Isakov, P. C. 80  
 Ishihara, Takehiko 234  
 Ishikawa, S. 147  
 Ishkin, I. P. 210  
 Itel'son, L. B. 238, 240  
 Itin, A. V. 114  
 Ito, Masukuni 233

Itsokovich, E. L.	95
Ivakhnenco, A. G.	206
Ivanenko, D. D.	236
Ivanenko, V. I.	123
Ivanov, G.	14
Ivanov, P. D.	15
Ivanov, V. E.	183, 204
Ivanov, V. N.	220
Ivanov, Ye. N.	241
Ivanov, Yu. N.	167
Ivanova, K. S.	93
Ivanovich, K. A.	23
Ivantsov, P. F.	185
Izbranov, P. D.	213
Izotov, A. A.	158

- J -

Jacquet, A.	188
Jacquet, F. A	133
Jaeger, G.	193
Jaenicke, Walther	233
Jahn, R.	231
Jakob, Ludwig	101
Jakutis, T.	242
Jander, J.	101
Janiche, W.	141
Janke, W.	193
Janker, R.	117
Jankiewicz, Z.	43
Janos, Kopa	30
Jastrzebski, Bronislaw	32
Jemuovic, R.	45
Jen, Yun-feng	178
Jerczynska, Maria	35
Jerschel, Dietrich	101
Jerusalimsky, N. D.	79
Jespersen, Kund	49
Jirat, Frantisek	133
Jochmann, F.	231
John, Friedmar	28
Joncic, Koca	46
Jongh, G.	102
Juganov, E. M.	80
Jung-Zaeper, Curt	144
Juza, Robert	105

- K -

Kabalaliyev, Yu.	12	Katskova, O. N.	222
Kabrhel, A.	187	Katz, W.	189
Kadlec, J.	223	Kauffmann, T.	104
Kadomtsev, B. B.	215	Kaufmann, A.	133
Kagan, Yu. M.	198	Kaufmann, H. P.	102, 103
Kaganer, M. G.	208	Kawinski, Stanislaw	37
Kagi, J.	181	Kayas, G.	224
Kajaste, E.	47	Kazakov, A.	13
Kalabina, A. V.	89	Kazanskiy, G. S.	199
Kalafati, D. D.	131	Kazansky, I. A.	158
Kalashnikov, N. A.	115	Kazhdan, P. I.	87
Kalchev, Kalcho	26	Kelendzheridze, D. L.	208
Kalganov, A. F.	213	Kerversau, M. de	135
Kalikhman, L. Ye.	204	Keyl, H. G.	83
Kalinin, A.	73	Khachatryan, Ts. F.	165
Kalinin, P. F.	1	Khamudkhanov, M. Z.	113
Kaliuzhnyi, M. I.	92	Kharchenko, V. F.	218
Kal'nitskiy, Ya. B.	7	Khaykin, A. M.	14
Kamke, D.	200	Khazan, I. B.	129
Kamov, N.	76	Khboynitskaya, N. A.	174
Kampschulte, G.	189	Khetaguri, S.	241
Kandror, V. I.	169	Kheyfets, M. Ye.	159, 160
Kanevskiy, S. L.	169	Khitrin, L. N.	203
Kapikravan, L.	17	Khokhlov, V. A.	122
Kapitsa, S. P.	153	Kholodov, Yu. A.	80
Kaplan, A.	3	Kholodoyl, Yu. A.	114
Kapytin, L. M.	204	Khorunzhiy, V. A.	16
Karachentsev, M. D.	9	Khoryak, G. M.	216
Karaflat, H.	85	Khronin, D. V.	127
Karamsin, Miroslav	199	Khrushchev, M.	120
Karepetyan, E.	12	Khurgin, Ya. I.	112
Kargin, V. A.	20	Kibik, Stanislav	116
Karinthy, P.	134	Kielick, S.	234
Karmanov, B.	18	Kiesel, K. L.	191
Karpeuich, A. F.	81	Kim, M. P.	18
Karpman, V. L.	168	Kimura, H.	147
Kartashen, A. I.	211	Kinoshita, S.	147
Kashkarov, V. P.	205	Kirianenko, A.	187, 188
Kasimov, B. S.	211	Kirillov, S.	14
Kas'ko, V. I.	210	Kirpichnikov, I. V.	112, 197
Katazume, Mitsuki	234	Kir'yakov, G. M.	151
Kato, Y.	107	Kirzon, M. V.	166
Katonin, V. A.	172	Kiselev, A. A.	87
Kats, Sh.	181	Kiselev, N. V.	158
		Kislyakov, B.	5
		Kitin, G.	5

Klatt, F.	28	Korovin, Yu. I.	92
Kleiner, K. E.	91	Korshunov, Yu. M.	114
Kletskin, M. I.	16	Koscevic, Petar V.	27
Klinov, K. I.	90	Koshkin, M. L.	209
Klitin, N. P.	217	Kosian, A.	27
Klumpke, A.	179	Koster, W.	100, 189
Knacke, O.	100, 190	Kostyuk, V. I.	123
Knigge, W.	84	Kosubovs'kiy, S. F.	124
Knoch, von Werner	194	Kotariya, A. F.	216
Knorozov, Yu. V.	240	Kovacs Hamburg, A. S.	180
Knuppel, H.	104	Kovalenko, V.	19
Ko, Ying-kwei	177	Kovalenko, Ye. S.	213
Kobozev, N. I.	221	Kovalevskiy, V.	241
Kobrinaskiy, A. Ye.	239	Kowalski, Jewxy	33
Koch, W.	192	Koyranskiy, B. B.	209
Kocherezhkin, C. G.	219	Kozak, A. P.	44
Koehler, O.	30	Kozhevnikov, M.	22
Koenigs, Ernest	101	Kozhin, A.	110
Kofler, H.	140	Kozlik, M.	223
Koglin, W.	142	Kozlov, I. M.	130
Kohler, W.	192	Kozlov, P. V.	20
Kolditz, L.	105	Kozubovskiy, S. F.	123
Kolesnik, B. P.	183	Kramer, H.	98
Kolisevski, Lazar	42	Krandsdorf, W.	191
Kolmakova, M. N.	23	Krasavtsev, N. I.	14
Kol'man, E.	239	Krassmann, R.	193
Kolmogorov, A. N.	163, 239	Krause	29
Kolomoytsev, V. P.	2	Krayko, A. N.	222
Koltun, M.	235	Kremenchugskiy, L. G.	223
Kolupayev, A. P.	151	Kremn'ov, O. O.	208
Kolupayev, P. I.	7	Kreulitsch, H.	142
Kolyvanov, A. D.	9	Kreynin, Gherman Vladinirowich	204
Komarov, E. V.	92	Krimmel, E.	232
Kondrashov, A. P.	79	Krivoglaz, M. A.	201
Konopal'tsev, I. M.	156	Krokhin, O. N.	114
Konovalov, N. Ye.	16	Kron, M.	188
Koppen, N.	229	Kronmuller, H.	143
Kopyan, L. A.	128	Kruglyakova, K. Ye.	167
Kopyrin, I. A.	89	Kruglykh, A. A.	204
Kopytovskaya, L. P.	172	Ku, Teh-chen	69
Kordun, N.	27	Kuchinskiy, G. S.	219
Korizkij, K. I.	143	Kudryashova, O. I.	169
Korobeynikov, V. P.	204	Kudryavtsev, L. D.	170
Korobov, I. I.	130	Kudymov, B. Ya.	120
Korobova, A. A.	170	Kuemmel, F.	229
Korolyev, B. I.	203	Kukarin, A. I.	125

Kukarin, A. I.	125	Leduc, Victor	51
Kukhtenko, V. I.	121	Lee, Chong-yool	70
Kulikov, D. K.	163	Lehfeldt, W.	136
Kulykov, M. O.	123	Lehman, R.	138
Kumisishvili, V. A.	151	Lehmann, O. H.	142
Kunchev, Khristo	26	Leinerovich, G. Ya.	186
Kuntscher, W.	190	Leistikow, Siegiried	233
Kuntsevych, V. M.	124	Lejeune, Jerome	178
Kupriyanova, V. M.	209	Lekvindaze, R. D.	13
Kupzog, K.	142	Lemke, K.	138
Kurihara, T.	147	Leont'yev, A. I.	222
Kurlyandskaya, E. B.	167	Leont'yev, B. I.	90
Kurochkin, F. P.	76	Leopoldo, Jose	85
Kurtsin, I. T.	164	Lepin, L. K.	234
Kuzmanow, Aleksi	26	Leshcinskaya, E. I.	90
Kuz'mina, V. K.	23	Letort, M.	149
Kuzminski, A. S.	214	Letunov, S. P.	168
Kuznetsov, P.	239	Levchenko, V. E.	127
Kuzovkov, N. T.	131	Leveau, M.	133
Kytoeniemi, T.	96	Levich, V. G.	201
 - L -			
Ladensack, Waltraut	28	Levin, G. E.	132
Ladyzhevskiy, M. D.	212	Levit, M. E.	126
Laizner, H.	140	Levitina, N. A.	166
Lan, Hsi-chun	176	Levshin, V. L.	213, 215
Lapinski, Zdzislaw	148	Leyensetter, W.	143
Lapitskiy, A. V.	219	Li, Hsueh-chu	82
Lapras, A.	178	Li, Hui-fang	177
Lapras, Andre	179	Li, Shou-chang	66
Larin, D. A.	151	Liang, Kuo-an	59
Lastovetskiy, V. V.	174	Liebert, E.	140
Laszlo, Lajos	32	Lien, Li-chuan	177
Laura, Magyar	194	Lihl, F.	189
Lavrovskiy, K. P.	87	Lin, Chuan-yang	175
Laytes, F. L.	166	Linkovskiy, G. B.	115
Lazarev, V. B.	89	Lints, V. P.	129
Lazitch, B.	50	Lipis, L. V.	92
Le, Trung Toan	65	Lipka, K. L.	1
Le, Van Thiem	242	Lipon, B. V.	186
Lebedev, A.	169	Lis, Bronislaw	33
Lebedev, M.	161	Litovehenko, S. G.	220
Lebedinskiy, A. V.	164	Litvinov, G. I.	115
Lebedinsky, Audrey Vladimirovich	196	Liu, Kuo-kuang	58
		Liu, Shih-pai	58
		Lobanov, Yu. V.	199
		Loewe, Helmut	28
		Loffler, H.	139

Lofsnes, Knut	52	Mansurov, A. R.	166
Loginov, V. I.	127	Manukhyan, R. S.	113
Lohs, Karlheinz	99	Mao, Shou-pai	174, 175
Lokotov, Yu. A.	92	Marchesini, L.	194
Lokshin, V. A.	217	Marchidan, D. I.	109
Lorenz, V.	96	Marenov, A. Ye.	211
Loscher, H.	140	Marin, Theo	49
Losikov, B. V.	125	Marinov, M.	197
Lowenthal, S.	117	Markov, A.	112
Lozinskiy, M. G.	9	Markov, A. M.	25
Lu, Hsiang-yun	176	Markov, Detelin	26
Lu, Tzu-hui	177	Markova, G. V.	207
Lubke, E.	224	Marteil, Lucien-Robert	136
Lubsantseren, G.	64	Martin	179
Lucaci, I.	39	Martynov, N.	11
Lueng, W.	141	Martynovskiy, V. S.	128
Lugovskoy, V. M.	183	Mashin, V.	13
Lunts, Ya. L.	128	Mashkevich, Z. M.	165
Lutidze, Sh. I.	113	Masif, Raoul	40
Lyashenko, V. S.	86	Maslennikov, M. V.	222
Lypkivs'kiy, K. O.	124	Maslova, N.	18
Lysenko, Jozef	34	Massarotti, A.	146
Lyublina, Ye. I.	168	Matalina, G. A.	111
 - M -			
Macarsek, I.	96	Matey, I.	40
Madejski, Jan	43	Matveyenko, N.	10
Mader, S.	193	Matveyenko, V. V.	121
Maglaperidze, O. K.	113	Matveyev, G. P.	2
Mahn, G.	191	Matveyev, V. V.	197
Makarov, N. P.	159	Mayofis, I.	4
Makarov, P. O.	166	Mazing, M. A.	201
Maldaque, P.	99	Medvedev, M. L.	168
Mal'dzhyanate, S.	239	Meier, L. A.	88
Malek, P.	167	Melchoyu, Ion	26
Malinovskaya, T. A.	91	Melekhov, V. V.	238
Mallabiu, G. A.	169	Meliya, A. S.	171
Mârlin, M.	98	Mel'nikov, L. A.	132
Mal'yev, A. F.	223	Mel'nikova, N. S.	204
Mamoutov, O. V.	110	Memeret, M.	224
Mandelshman, S. L.	203	Mencarelli, E.	188
Mandrovs'kiy, B. Yu.	124	Meng, Chi-mou	176
Mandrovs'kiy-Sokolov, B. Yu.	123	Mennenoh, S.	99
Man'kina, N. N.	88	Meny, L.	97, 199
		Mercier, J.	97
		Merkhalev	110
		Merlin, R.	50
		Mertsalov, A. N.	149

Messin, G.	134	Moser, M.	83
Metzger, F.	117	Motornenko, A. P.	115
Meutsch, H.	137	Muhlrad, W.	162
Meyer, K.	192	Mukanov, I. P.	95
Meyerovich, V.	10	Mulders, O.	141, 191
Mezhirov, I. I.	212	Muller, A.	139
Michel-Levy, Mireille	187	Muller, H.	102
Midov, D. S.	153	Muller, I. R.	194
Mielenz, Klaus-Dieter	231	Munzel, H.	228
Migdal, A.	221	Muraki, I.	107
Mikhailov, A. I.	199, 240	Murgulescu, I. G.	109
Mikhalevskaya, M. B.	173	Murzayev, E. M.	64, 65
Mikhanlov, V. A.	112	Musil, J.	116
Mikhaylov, L. M.	206	Myursepp, P.	211
Miller, F. F.	154		
Milov, B. G.	3		
Milovatskiy, N.	9		
Minchev, Ya, Khr.	208		
Mineyev, Yu. V.	166		
Minkh, A. A.	237		
Mints, A. A.	21		
Mirolyubev, Ye. N.	96		
Mischelbow-Petrossian, Babushkin	104		
Mishustin, I. U.	221		
Mitalauskas, A. A.	218		
Mitrani, L.	111		
Mitsuoka	63		
Mitra, R. M.	103		
Miu, T'ing-chien	177		
Mnshkin, V. A.	87		
Modi, E. K.	103		
Moiseychik, A. N.	113		
Mokhnachev, M.	73		
Moldavan, Y.	91		
Moldovan, Ion	27		
Mollenstedt, G.	230, 232		
Molodtsov, V.	220		
Monoszon, E. I.	23		
Montagnier, J.	135		
Moreau, J.	188		
Morelli, E.	181		
Moriconi, N.	146		
Morita, Y.	107		
Morozov, A.	80		
Morozov, V. G.	211		
		- N -	
		Nakhil'nitskaya, Z. N.	164
		Nalivayko, G.	6
		Narikashvili, S. P.	171
		Narumi, Y.	147, 148
		Natanson, S. G.	78
		Natradze, A. G.	2
		Naumann, F. K.	192
		Nayer, V. A.	128
		Naymenko, P.	5
		Nazarov, I. A.	114
		Nazarov, I. L.	171
		Nedea, Ede	31
		Nekrasov, L. I.	95
		Nekrasov, L. N.	219
		Nekrasov, Z. I.	14
		Nemba, S.	108
		Nemchinov, V.	18
		Nemitz, G.	84
		Neske, H. K.	118
		Nesmeyanov, A. N.	198
		Nesmeyanov, An. N.	204
		Nesterov, V. G.	201
		Nesteruk, V. F.	127
		Neumann, E.	140
		Neumann, W.	228
		Neveskiy, Ye. N.	157
		Nevakaya, A. A.	166
		Nevzorov, B. A.	86

Neyfel'd, I. Ye.	121	Oganesyan, K.	12
Neymark, F.	21	Oganesyan, Yu. Ts.	199
Neymer, M.	5	Oiks, G. N.	184
Nguyen, Nhu Kim	65	Oka, Yoshinori	147
Nguyen, Van Su	65	Oliwa, Wl.	44
Niemczynowicz, Janusz	36	Ol'khovnikov, Yu. P.	86
Nifant'yev, E. Ye.	94	Olszewski, Posel Jerzy	34
Nikitin, A. I.	186	Oparin, A. I.	79
Nikitin, E. K.	90	Oranskiy, I. Ye.	173
Nikitin, V. N.	222	Orlov, D. P.	198
Niklevich, A. V.	95	Orlov, G. A.	167
Nikolayev, A. N.	185	Orlov, Yu. A.	129
Nikolayev, B. A.	121	Orsos, Sandor	106
Nikolayev, V. A.	160	Orsy, Jozsef	32
Nikolayeva, N. V.	167	Osharov, Yu. S.	125
Nikolov, Iv.	42	Osinskiy, B.	156
Nishihara, Hideaki	234	Ostroukhov, M. Ya.	89
Nishihara, Hiroshi	234	Ostrovskiy, V. Yu.	238
Nishimura, H.	195	Otto-Buck	144
Nishiodi, Mutsumi	233		
Nishnianidze, G. A.	165		
Nizhel'skiy, P. E.	185		
Nobylova, E. M.	91		
Nomofilov, Ye. V.	217		
Nordman, L.	223		
Norkin, N. N.	214		
Noskov, F. P.	155		
Novikov, R.	7		
Novikov, Yu. V.	23		
Novinskiy, I. I.	80		
Nowicki, Stanislaw	33		
Numerov, B.	152		
Nyamaa, O.	64		

- 0 -

Oblapenko, P. V.	79
Oblivin, A. N.	222
Obolonchik, N. V.	94
Obrenovic, Zivko	46
Obrosov, A. N.	166, 172
Obruca, L.	116
Obat, K. H.	192
Ochapovskiy, B. L.	152
Odiashvili, B.	11
Oelsen, O.	190

- P -

Pastold, H. K.	236	Petrov, N. N.	215
Paganelli, M.	106	Petrov, P. I.	163
Pahl, M.	231	Petrov, Ye.	235
Paksy, L.	106	Petrovic, D.	45
Palomba, M.	118	Petrovskaya, M.	8
Panchenko, Ye. V.	184	Petunin, B. V.	121
Panek, K.	196	Pfeiffer, H.	193
Pankova, Ya. V.	170	Pham, Ngoc Thach	70
Pan'shih, I. F.	185	Pichler, H.	180
Pao, Chiao-ming	65	Pichler, H. J.	84
Paolicchi,	133	Piechaczek, M.	140
Papp, Laszlo	30	Piekara, A.	106
Papuli, G.	146	Piekenbrink, R.	138
Parasyuk, O.	163	Pierrot, Gerard	47
Parczynski, Stanislaw	35	Pietzka, G.	226
Parfenov, V.	12	Piklikiewicz, Henryk	34
Parrini, Luigi	181	Pilichowski, Czeslaw	36
Parrot	155	Pillet, J.	82, 178
Parsadanyan, R. S.	165	Pinsker, Mark Semenovich	163
Partmann, W.	84	Pintea, Al.	39
Pastukhov, I. P.	1	Pioro, Tadeusz	43
Pasynskiy, A. G.	94	Pipko, D.	130, 237
Paul, R.	118	Pisarenko, A.	13
Paverman, S. V.	113	Plainevaux, J. E.	135
Pavlov, I. I.	120	Plaksin, I. N.	89
Patlova, L. P.	172	Planelyes, Kh. Kh.	172
Pawelski, O.	141	Plaskin, I. N.	88
Pawlenty, Romuald	37	Platema, A.	142
Pawlikowski, S.	108	Platonov, K. K.	164
Pazos, Felipe	22	Platonov, P. A.	196
Pellinen, L. P.	159	Pleshakov, G.	4
Perel'man, F. M.	95	Plesniak, S.	108
Perfilov, V. G.	132	Plotkin, A. B.	170
Pergent, J.	48	Podlubnyy, I. Ya.	88
Perkitny, T.	83	Pöhl, D.	192
Perov, S. P.	126	Pohl, H.	190
Perselkov, Yu. A.	204	Pohl, Laszlo	31
Peters, R.	190	Pointu, P.	98
Peters, R. H.	97	Poissonnier, H.	134
Petrescu, Aureliu	39	Pokrovskiy, G. I.	209
Petrikov, V. T.	24	Poletavkin, P. G.	217
Petropoulos, J. H.	97	Poletaykin, P. G.	93
Petrov, G. D.	16	Polikarpov, G. G.	220
Petrov, K. A.	94	Polyayev, V. M.	214
		Pomazanov, I. N.	128
		Pomeranchuk, I.	207

Pomerantsev, I. I.	154, 155	Rapoport, Zh. Sh.	169
Pomianowski, Miron	33	Raschke, K.	231
Pomp, A.	190	Raseyev, D.	195
Ponomarev, Boris	49	Rassokhin, V.	8
Popoli, G.	146	Rastaturin, V. A.	214
Popov, A.	3, 8	Ratner, B. S.	206
Popov, A. I.	197	Rauhenbakh, V. B.	205, 206
Popov, G.	238	Ravar, Ion	40
Popov, P. V.	81	Rawer, Karl	236
Popper, A.	39	Raynal, J.	225
Porfir'yeva, N. N.	127	Reerink, W.	138
Porkert, O.	141	Reihle, M.	189
Poroshin, O. F.	202	Reinstadler, R.	194
Pospelov, G. S.	112	Reiser, W.	227
Potapova, S. A.	93	Rellermeyer, H.	104
Potekhin, I. I.	55	Reznikov, R. A.	14
Pravdyuk, N. F.	183	Reznyakov, A. B.	240
Predvoitelev, A. S.	202, 205	Ribbeck, F.	230
Prenant, Marcel	51	Richard, K.	189
Presman, A. S.	166	Richter, Gustav	226
Pribyl, J.	190	Robinet, M.	97
Pribytkovskiy, L. N.	55	Rochet, Waldeck	50
Prikmajer-Tomanovic, Zorica	42	Rode, A.	238
Pris, G. V.	132	Rodevich, Vs.	22
Privalovskaya, G. A.	2	Rogozhin, V.	18
Prod'homme, M.	226	Rogozinski, Wladyslaw	34
Prokhorov, V.	8	Rohlke, G.	144
Prosetskiy, V. A.	24	Roinishvili, V. N.	112
Proskurovskiy, Ya. S.	14	Roman, Alexandru	39
Prostakova, I. G.	164	Romanova, Ye. S	209
Pudovkin, I. M.	153	Romanovich, B. S.	22
Pugachevskiy, B. P.	174	Romenets, V. A.	127
Pugovkin, A. U.	185	Ronge, E. W.	148
Purebdorj, J.	64	Rostas, Oszkar	181
Pushlenkov, M. F.	92	Rosteck, Walter	163
 - R -			
Raab, F.	137	Rostovtsev, S. T.	90
Radicke, E.	137	Rousseau, P.	99
Radionova, Ye. A.	167	Rozanov, A. V.	121
Ragchaa, U.	64	Rozanov, B. V.	129
Ramsayer, Karl	162	Rozdobud'ko, N.	7
Rapin	133	Rozenberg, S. Sh.	125
Rapoport, I. A.	79	Rozenfel'd, I. L.	86
		Rozorenov, N. T.	203
		Rozovskiy, M. I.	212
		Rubinowicz, A.	229
		Rudakov, A.	14

Rudenko, M. G.	90	Schilder, Jaroslav	115
Rudnev, K. N.	237	Schiller, P.	226
Rudnevveliy, N. K.	186	Schlag, E. W.	233
Rudnitskaya, E. S.	93	Schleese, G.	139
Rudorff, W.	189	Schmidt, J.	190
Rudoy, Ye. F.	6	Schmidt, R.	224
Rukolaine, G. V.	111	Schmidt-Lorenz, A.	84
Rummel, K.	140	Schmidtmann, E.	227
Rumler, Shtirad	111	Schneider, M.	227
Rumynskiy, A. N.	212	Schneider, Th.	228
Ruzhitskiy, V. O.	237	Scholz, G.	83
Rynin, N. A.	156	Scholze, H.	229
Ryschkewitsch, E.	101	Schreiber, D.	99
Ryumin, S.	7	Schuh, R.	141
Ryzhenko, M.	80	Schule, Wolfgang	144
Ryzhkova, M. N.	168	Schultze-Dewitz, G.	83
- S -			
Saeki, K.	148	Schulz, H.	84, 162
Safonov, V. A.	170	Schurz, E.	229
Saito, Yukio	118	Schutte, H. G.	138
Sal'chenko, I. N.	130	Schwabe, G.	104
Salengro, Paul-Andre	136	Schwartz, G.	133
Salesse, Marc	187	Schwarz, C.	191
Salishchev, K.	22	Seeger, A.	193, 226
Salmutter, K.	193	Selacolu, S.	104
Sandermann, W.	84	Selecki, Anatol	91
Sandrigaylo, N.	10	Semenov, A. I.	21
Sansone	182	Semenov, N. M.	3
Sanzharovskiy, A. T.	221	Semenov, Yu. N.	186
Sapozhnikov, A. A.	150	Semikhin, I. A.	221
Saridabakhov, K.	4	Serbulov, S.	12
Sarkany, Tamas	145	Serebryakova, V. S.	163
Sassu, Stefan	40	Sereda, T. D.	158
Sato, S.	107	Serevryakov, R. A.	197
Savanin, B. V.	22	Sergeyev, G. T.	210
Savchenko, Ye. D.	169	Sergiyevskiy	154
Savel'yev, R.	22	Serov, S. I.	173
Savinov, Yu.	17	Settembrini, Domenico	52
Savostyanova, M. V.	89	Seul, V.	191
Sayenko, G. P.	196	Sevatsyanov, N. P.	113
Schaefers, W.	141	Shakhov, I. F.	218
Schenck, H.	99, 100	Shakmanov, V. S.	113
Schenck, Rudolf	105	Shapovayn, B. I.	183
Scheuch, Gerhard	82	Shashkn, V. L.	111
		Shashkov, O. L.	210
		Shatrov, Ye. V.	149
		Shaumyan, S. K.	237

Shaydakov, V. I.	77	Sirota, A. M	130
Shayevich, A. V.	131	Sirovica, Borivoje	41
Shcheglov, V. P.	152	Sitenko, O. H.	218
Shchelkanovtsev, L.	184	Skachenko, N. G.	160
Shchetinin, I.	10	Skirta, B. K.	207
Shchukin, A. N.	120	Skjerven, Von O.	105
Sheboldashev, I.	11	Skobel'tsyn, D. V.	217
Shenbrot, I. M.	122	Skopintsev, B. A.	156
Sheng, Po-liang	174	Skorokhodov, I. I.	95
Sheng, Yun-ku	177	Skuin, K.	191
Sherman, D. S.	151	Skyrta, B. K.	124
Sherstyuk, V.	12	Slama, L.	196
Sheyvekhman, B. Yu.	216	Slawecki, Henryk	37
Shibanov, A.	236	Slivin, Yu. A.	159, 160
Shileyko, A. V.	122	Sludskiy, F. A.	154
Shimizu, J.	147	Smirenkin, G. N.	201, 202
Shipinov, N. A.	81	Smirnov, A. A.	201
Shiridov, Yu. B.	149	Smirnov, E. A.	183
Shklovskiy, I. S.	235	Smirnov, V. A.	115
Shmel'kov, I.	5	Smirnov, V. P.	131
Shmits, A. A.	234	Smirnova, A. M.	169
Shneyder, M. S.	209	Smirnova, M. I.	168
Shoichi, Kasuga	63	Smit, J. A.	223
Shor, G. O.	214	Smykov, V. V.	160
Shpil'berg, P. L.	168	Snegovskiy, I. F.	131
Shpil'rayn, E. E.	211	Sobolev, Yu. P.	90
Shubina, S. B.	131	Sobolevskiy, Ch.	13
Shugayev, F. V.	220	Sobolski, Roman	35
Shupik, P. L.	173	Sofroni, L.	108
Shurikhina, L. A.	166	Sokl'skiy, D. P.	16
Shvedov, V. P.	152	Sokolinskaya, I. G.	186
Shveikin, V. V.	127	Sokolov, V. N.	88
Shvidkovskiy, Ye. G.	183	Sokolov, Ye. N.	173
Sibirko, A. N.	16	Sokolov, Yu. N.	172
Sidorov, I.	10	Solinov, F. G.	14
Siebel, E.	190	Soloukhin, R. I.	205
Siforov, V. I.	114	Saltyk, V.	236
Signora, M.	146	Sommermeyer, K.	232
Simanov, Yu. P.	219	Son, Yongsun	67
Simon, E.	139	Sonntag, G.	228
Simon, J.	188	Sonoguchi, Tadao	182
Simonenko, T. N.	153	Sorkin, L. I.	126
Simonis, P. H. J.	199	Sorokin, Ye. M.	15
Simova, P. D.	208	Sosnova, G. S.	221
Sirieix, Michel	77	Spauszus, S.	191

Speranskiy, L. I.	91	Susser, A.	99
Spiridonova, S. I.	90	Svatkova, T. G.	160
Spirin, A. S.	94	Sveshinkov, A. A.	128
Spitzer, H.	48	Svetov, B. S.	132
Spoerl, Firma J. Heinrich	145	Swiderski, J.	138
Springorum, D.	227	Syдов, P.	30
Stach, E.	149	Syskov, K. I.	126
Stagnara, P.	178	Szczecin, M.	36
Stanek, Ivan	46	Szulkin, P.	118
Stangen, A.	117	Szynkarczuk, Adam	34
Stangler, F.	193		
Staniewski, E.	38	- T -	
Stanyukovich, K. P.	237	Tabagari, I. S.	165
Starik, I. E.	92	Tackert, R.	141
Starodubov, K. F.	183, 184	Tai, Tzu-ying	175
Starodubtsev, S. V.	196	Takahashi, R.	149
Startsev, F.	6	Takeda, A.	200, 234
Startseva, L. N.	220	Taketani, Kyoaki	107
Stauffer, W.	136	Takizawa, T.	147
Stenkhoff, Robert	105	Talantov, A. V.	131, 205
Stepanov, P. F.	155	Taliyev, V. N.	207
Steppe, Raoul	135	Tanyukovich, A. V.	125
Stern, O.	232	Tarasenko, N. Yu.	164
Sternzat, M. S	150	Tarasienkow, A.	44
Stetsyuk, A. M.	165	Tarczy-Hornoch, Antal	31
Stobiecki, Tadeusz	33	Tatarskiy, V. I.	78
Stolyarova, M.	10	Taufel, K.	102
Stonov, L. D.	86	Tavolotti, P.	187
Storozhnik, A. A.	130	Teissier, P.	188
Stroehm, Carl Gustaf	20	Teng, K'e-sheng	57
Strohl, G.	162	Teng, Tai-yuan	62
Strona, I. G.	13	Teodorescu, I.	226
Strug, E. M.	184	Teofilovski, Cedomir	223
Struminski, Juliusz	33	Terebenin, B. P.	120
Strunkin, V. A.	126	Terfve, Jean	241
Strzoda, L.	195	Tessari, Luigi	181
Stulov, V. A.	124	Testero, G.	118
Styblova, V.	180	Thomas, M.	187
Styrikovich, M. A.	217	Thomisch, W.	100
Sudakov, S. G.	157	Thorez, Maurice	50
Sukhanov, V.	23	Tikhomirov, M.	6
Sukhodrev, N. K.	201	Tikhomirov, P. L.	128
Sung, Hung-chao	176, 177	Tikhonov, N.	12
Sung, Kan	175	Tillo, A. A.	161
Surnov, A. V.	217		

Timashov, V. V.	218	Tsukhanova, O. A.	202
Timofeyev, A. N.	153	Tsuneyasu, Ohashi	182
Timofeyevicheva, O. A.	89	Tsyskovskiy, T.	91
Timrot, D. L.	130	Tubiana, M.	179
Ting, P'ei-min	69	Tuchina, A. S	111
Tippelskirch, H.	229	Turk, G.	101
Tiron, I. M.	159	Turonek, Jezzy	34
Tishgshkina, A. S	111	Turring, A.	146
Tishin, V. G.	199	Tyszowski, J.	44
Tissi, C.	146	Tyukavkina, N. A.	89
Todorovic, Ruzica	41	Tyukina, A. P.	167
Tolksdorf, Sibylle	233	Tyurikov, G. S.	95
Tolmacheva, N. S.	197		
Tolstikov, Ya.	13	- U -	
Tomic, M.	41	Udal'tsov, Ye.	55
Topchiyan, M. Ye.	205	Ukaji, Rokuo	107, 108
Topchiyev, A. V.	87	Ukleja, R.	35
Torban, B. S.	130	Ulbricht, Walter	29
Toschi, Paolo	182	Ulitko, A. T.	208
Toshio, Sakeki	65	Urmayev, N. A.	158
Toshiya, Hayashi	118	Usmakov, I.	5
Tournois, P.	116	Utevskiy, L. M.	185
Tovchigrechko, S. S.	150	Utkin, L. A.	218
Trabczynski, Witold	34	Uzhik, G. V.	203
Tran, Huu Duc	65		
Tran, Linh Song	65	- V -	
Tran, Quy Kien	65	Vaarandi, M.	8
Tran, Tu Phong	65	Vadkovskaya, Yu. V.	237
Tremillon, Bernard	96, 97	Vainshtein, L. A.	201
Trentini, B.	134	Vaks, V. G.	198
Trofimov, K.	55	Valentin, Francis	179
Troitsky, V. L.	172	Vallee, B.	181
Trojanek, Z.	116	Vellee, G.	179
Trokhimchuk, Yu.	163	Valota, A.	135
Trushchenko, A. A.	124	Varmalov, V. S.	91
Tsai-chu	225	Varshavskiy, D.S.	110
Tschenschner, Helga	28	Vasilenko, F. D.	172
Tsechal', V. A.	124	Vasil'ev, B. A.	80
Tsegmid, Sh.	69	Vasil'ev, G.	3
Tselikov, A. I.	129	Vasil'ev, L.	21
Tsendenbal, Yu.	64	Vasil'ev, M. V.	237
Tsifka, I.	86	Vasil'ev, Yu. N.	15
Tsuda, S.	140	Vasil'ev, Yu. V.	16
Tsujino, Takeshi	234		
Tsukerberg, G. M.	2		

Vasilyeva, S. L.	203	Voronov, A. G.	160
Vasil'yevskiy, S. P.	7	Voronov, N. M.	204
Vasyl'yev, V. I.	123	Voskoboinikov, I. M.	221
Vatazhin, A. B.	126	Voukalovich, M. P.	93
Veccheitti, Tullio	52	Vul'fel'dt, I. K.	223
Veksler, V.	215	Vulis, L. A.	205
Velisovskiy, D. S.	87		- W -
Verdichevskiy, M. N.	216		
Vernikovskaya, I.	80	Wagner, C.	106
Vernisse, P.	133	Walter, H.	117
Vertel', I.	7	Walter, R.	139
Veselovskiy, V. K.	95	Wang, Chai-hsia	69
Viekha, Ya.	111	Wang, Cheng-i	174
Viktorov, D. V.	197	Wang, Chi-wu	175
Vilesov, G.	12	Wang, Shu-chen	176, 177
Vincent, J.	51	Wang, Shu-chien	176
Vincent-Geisse, J.	225	Wang, Te-chi	69
Vincenzoni, P.I.A.	146	Water, P.	192
Vinogradov, K.	18	Weber, E.	138
Vinogradov, V. V.	20	Weber, K. L.	140
Vishinskiy, N. N.	186	Wegener, W.	143
Vishkarev, A. F.	185	Wehner, Gottfried	227
Vitotova, M. I.	3	Wei, Wen	57
Vityazeva, V.	8	Weill, G.	161
Vizi, I.	197	Weiss, R.	98
Vodyanoy, A.	76	Weng, Hsin-chih	175
Vogel, Erhard	28	Wicher, A.	104
Vogel, R.	102	Wieland, H.	99
Vogt, H.	118	Wiemer, A.	138
Voigt, Klaus	137	Wiener, N.	239
Voitovetskiy, V. K.	197	Wienkoop, H.	27
Voldaikina, K. G.	94	Wiesenecker, I.	192
Voliner, H.	142	Wiest, Paul	139
Vol'kenshtein, M. V.	222	Wiester, H. J.	104
Volkov, M. M.	129	Wildschutz, E.	136
Volynskiy, M. S.	206	Wilenska, Esther	71
vom Ende, H.	191	Willems, J.	190
von Ardenne, M. M.	117	Wilmes, Kaethe	180
Von Bogdandy, L.	141, 193	Winczakiewicz, A.	119
Von Den Steinen, A.	189	Witte, Siegfried	180
von Hye, H.	141	Wojtowicz, Julian	37
von Takamuka, M.	140	Woldt, G.	193
Vorob'ova, K. I.	26	Wollast, R.	187
Vorob'yev, A. A.	213, 240	Wu, Cheng-chien	175
Vorob'yev, G. G.	241	Wu, Chieh-ping	176
Vorob'yev, S. M.	157	Wu, Ying-kai	176
		Wusatowski, Z.	195

- Y -

Yagodkin, V. I.	211	Zhongolovich, I. D.	78
Yagunov, S. A.	220	Zhukov, G. P.	197
Yakubovich, A. Ya.	88	Zhukov, G. R.	111
Yakushev, A. M.	184	Zhukov-Verezhnikov, N.	235
Yamawaki, S.	148	Zigmund, F. F.	211
Yanbykh, G. F.	132	Zikeyev, Ye. N.	16
Yan'-chzhu, Lyn.	131	Zimin, E. P.	212
Yang, Yen-te	60	Zimmermann, J.	101
Yantovskiy, Ye. I.	212	Zinchenko, N. S.	115
Yaroshevich, O. I.	198	Zinov'yev, L. P.	128
Yasinskiy, F. G.	76	Zoltanin, Gyorgy	32
Yavoiskiy, V. I.	184	Zotov, V. V.	86
Yefimov, I. M.	125	Zubkov, A. I.	126
Yegorov, A. F.	9	Zubkov, B.	174
Yeleonskiy, V. M.	209	Zubritskiy, L. A.	197
Yerastov, K. P.	206	Zvazin, I. G.	170
Yofe, Yu. M.	216	Zverev, M. S.	158
Yoffe, V. I.	172	Zvorono, B. P.	202
Yonin, A. S.	157	Zyrayanov, P. S.	209
Yoshio, Sunohara	118		
Yu-ai-feng	177		
Yuan	57		
Yudayev, N. A.	79		
Yurkina, M. I.	159		

- Z -

Zabiyakin, G. I.	111
Zabrodskiy, S. S.	219
Zager, B. A.	199
Zagrubskiy, N.	4
Zalharov, G.	4
Zakharov, N. N.	132
Zakharov, S. P.	2
Zakharov, Yu.	12
Zakrzewski, J.	139
Zandberg, E. Ya.	207
Zaslavskiy, Yu. S.	214
Zaytsev, I. A.	15
Zemlyanukhin, V. I.	93
Zercavins, P.	188
Zherebin, B. N.	9
Zhivov, L. G.	7
Zhongolovich, D.	152

\*This index does not include authors listed in the cover-to-cover table of contents.

\* \* \*

**UNCLASSIFIED**  
Central Intelligence Agency



Washington D C 20505

7 September 2004

Ms. Roberta Schoen  
Deputy Director for Operations  
Defense Technical Information Center  
7725 John J. Kingman Road  
Suite 0944  
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

A handwritten signature in black ink that appears to read "Nancy J. Alcivar" or "Sergio N. Alcivar".

Sergio N. Alcivar  
Chief, CIA Declassification Center,  
Declassification Review and Referral  
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

**UNCLASSIFIED**



## Processing of OGA-Held CIA Documents

The following CIA documents located at DTIC were reviewed  
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	File#	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0834505	78-03109A	49	1	1	36	Consolidated Translation Survey For December 1960	12/1/1960	240	Approved For Release	3/25/2004
AD0834506	78-03109A	49	1	2	37	Consolidated Translation Survey For January 1961	1/1/1961	318	Approved For Release	3/25/2004
AD0834340	78-03109A	49	1	3	38	Consolidated Translation Survey For February 1961	2/1/1961	363	Approved For Release	3/25/2004
AD0834341	78-03109A	49	1	4	39	Consolidated Translation Survey For March 1961	3/1/1961	206	Approved For Release	3/25/2004
AD0834342	78-03109A	49	1	5	40	Consolidated Translation Survey For April 1961	4/1/1961	411	Approved For Release	3/25/2004
AD0834343	78-03109A	49	1	6	41	Consolidated Translation Survey For May 1961	5/1/1961	327	Sanitized	3/25/2004
AD0834344	78-03109A	49	1	7	42	Consolidated Translation Survey For June 1961	6/1/1961	364	Approved For Release	3/25/2004
AD0834345	78-03109A	49	1	8	43	Consolidated Translation Survey For July 1961	7/1/1961	303	Approved For Release	3/25/2004
AD0834346	78-03109A	50	1	1	44	Consolidated Translation Survey For August 1961	8/1/1961	349	Approved For Release	3/25/2004
AD0834347	78-03109A	50	1	2	45	Consolidated Translation Survey For September 1961	9/1/1961	299	Approved For Release	3/25/2004
AD0834348	78-03109A	50	1	3	46	Consolidated Translation Survey For October 1961	10/1/1961	252	Approved For Release	3/25/2004
AD0834349	78-03109A	50	1	4	47	Consolidated Translation Survey For November 1961	11/1/1961	285	Approved For Release	3/25/2004
AD0834350	78-03109A	50	1	5	48	Consolidated Translation Survey For December 1961	12/1/1961	362	Approved For Release	3/25/2004
AD0834351	78-03109A	50	1	6	49	Consolidated Translation Survey For January 1962	1/1/1962	341	Approved For Release	3/25/2004
AD0834352	78-03109A	50	1	7	50	Consolidated Translation Survey For February 1962	2/1/1962	323	Approved For Release	3/25/2004
AD0834353	78-03109A	51	1	1	51	Consolidated Translation Survey For March 1962	3/1/1962	401	Approved For Release	3/25/2004
AD0834354	78-03109A	51	1	2	52	Consolidated Translation Survey For April 1962	4/1/1962	423	Approved For Release	3/25/2004
AD0834355	78-03109A	51	1	3	53	Consolidated Translation Survey For May 1962	5/1/1962	387	Approved For Release	3/25/2004
AD0834356	78-03109A	51	1	4	54	Consolidated Translation Survey For June 1962	6/1/1962	391	Approved For Release	3/25/2004
AD0834357	78-03109A	51	1	5	55	Consolidated Translation Survey For July 1962	7/1/1962	396	Approved For Release	3/25/2004
AD0834358	78-03109A	51	1	6	56	Consolidated Translation Survey For August 1962	8/1/1962	475	Approved For Release	3/25/2004
AD0834359	78-03109A	52	1	1	57	Consolidated Translation Survey For September 1962	9/1/1962	245	Approved For Release	3/25/2004
AD0834360	78-03109A	52	1	2	58	Consolidated Translation Survey For October 1962	10/1/1962	228	Approved For Release	3/25/2004
AD0834361	78-03109A	52	1	3	59	Consolidated Translation Survey For November 1962	11/1/1962	274	Approved For Release	3/25/2004
AD0834362	78-03109A	52	1	4	60	Consolidated Translation Survey For December 1962	12/1/1962	265	Approved For Release	3/25/2004
AD0834363	78-03109A	52	1	5	61	Consolidated Translation Survey For January 1963	1/1/1963	270	Approved For Release	3/25/2004